User's Manual

DXAdvanced R4

DX1000/DX1000N/DX2000 Custom Display

vigilantplant®

YOKOGAWA
Yokogawa Electric Corporation

IM 04L41B01-04E
2nd Edition

Thank you for purchasing DX1000/DX1000N/DX2000 (Hereafter, called “DX”).
This manual explains the custom display function of DX. Read this manual thoroughly in advance to use this function properly. Moreover, read it together with User’s Manuals IM04L41B01-01E or IM04L42B01-01E.

Notes

- The contents of this manual may change without prior notice in view of improving the performance and function.
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History

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How to Use This Manual

Structure of the Manual

Before reading this manual, read the Operation Guide and User's Manual to understand the basic operations.

This manual consists of the following three chapters, an appendix, and an index.

Chapter	Title and description
1	**Overview and Basic Operations** Explains the basic operations for configuring the custom display.
2	**Advanced Settings of Screen and Component** Explains the attribute of each component.
3	**Saving and Reading Screen Data** Explains the saving and reading of the configured custom display.
Appendix	Gives an example of the construction of an actual custom display.
Index	The index is listed alphabetically.

Symbols Used in This Manual

Note Calls attention to information that is important for proper operation of the instrument.

Markings

▶ This mark is used to indicate a reference to a related procedure or explanation.
Example : ▶Section 4.1

Subheadings

Procedure Carry out the procedure according to the step numbers.
All procedures are written with inexperienced users in mind; depending on the operation, not all steps need to be taken.

Explanation Explanation gives information such as limitations related the procedure.

Revision History

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Edition	Revised	Revisions, DX recorder series number
1st	November, 2008	New, R3
2nd	March, 2010	Added components Components added: Group name, System icon, Memory bar, Time label, Batch group number, Batch name, and Modbus In.

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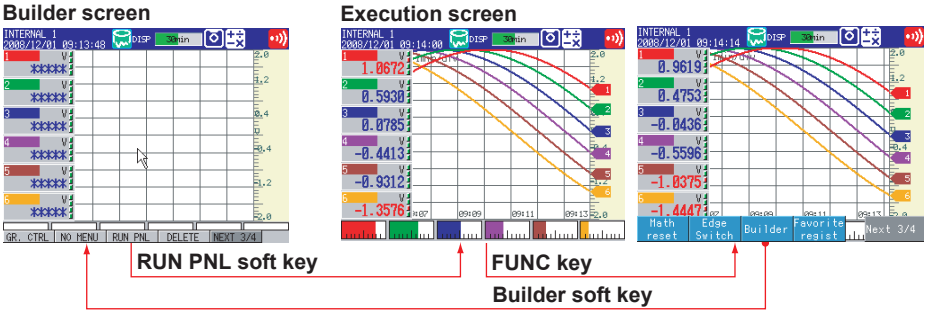
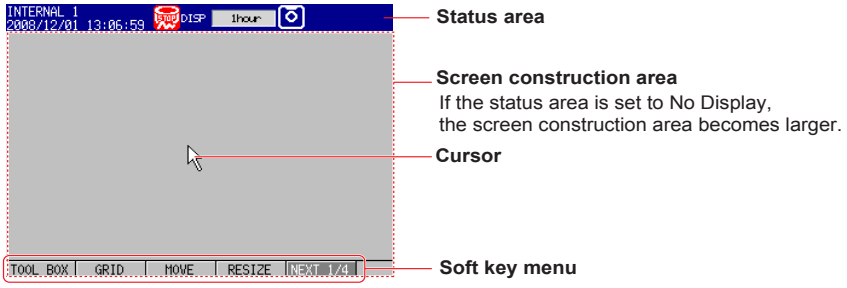
1.1 Overview

Custom display is a function to allow you to configure any screen to use it as the operation screen. Custom display consists of the **builder screen** and **execution screen**, which actually displays a configured screen as the operation screen. Switching between the builder screen and execution screen enables you to configure a screen while checking the execution screen.



Builder Screen

Configure a screen.



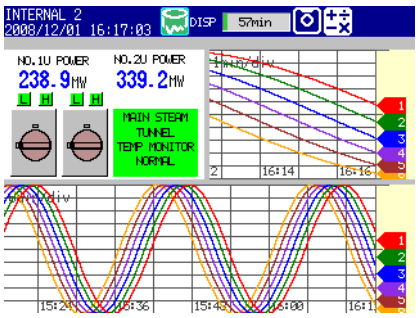
Soft Key Menu on the Builder Screen

Soft key menu	Description	Reference
TOOL BOX	Used to create components.	Section 1.4
GRID	Used to make grid settings on the builder screen.	Section 1.3
MOVE	Used to move the position of components.	Section 1.5
RESIZE	Used to change the size of components.	Section 1.6
PROPERTY	Used to set the attribution of components.	Section 1.7, Chapter 2
PASTE	Used to copy and paste components. This is hidden before you copy components.	Section 1.8
COPY	Used to copy components.	Section 1.8
ORDER	Used to set the arrangement (overlapping) of components.	Section 1.9
DEPEND	Used to make the visibility of components dependent on other components.	Section 1.10
GR. CTRL	Used to manage grouped components.	Section 1.11
NO MENU	Used to temporarily hide the soft key menu.	Section 1.13
RUN PNL	Used to execute and display a configured screen as a custom display.	Section 1.13
DELETE	Used to delete specified components.	Section 1.12
ALL DEL	Used to delete all specified components on the builder screen.	Section 1.12
UPDATE	Used to update a screen registered in external media (CF card).	Section 1.13

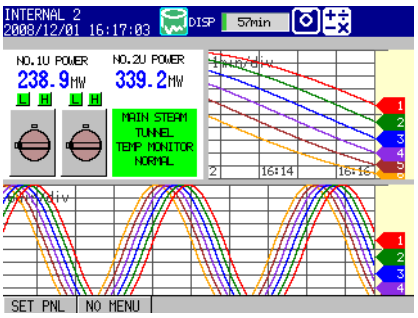
Execution Screen

Display a configured screen as an operation screen.

With the Runtime menu of screen attributes turned Off



With the Runtime menu of screen attributes turned On



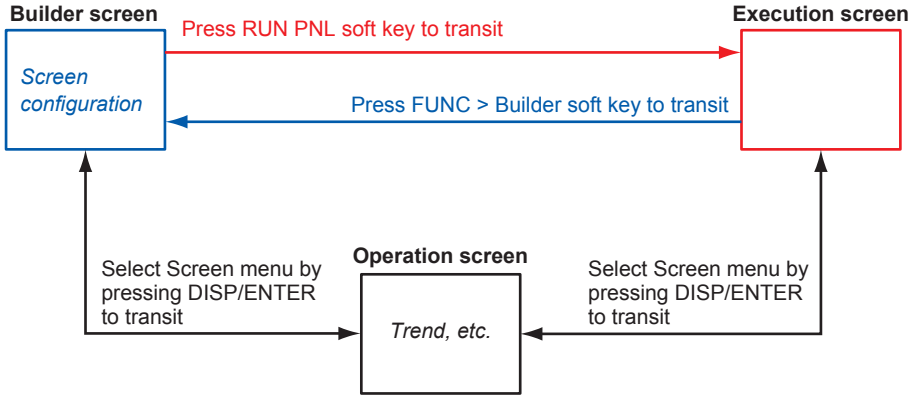
▶ For information on the Runtime menu of screen attributes, see section 2.1.

When you turn On the Runtime menu of the screen attributes in the builder screen, the **Builder** and **MENU soft keys** are displayed in the execution panel.

▶ See Section 2.1: These keys are not displayed in the factory default setting.

- On the execution screen, you can execute configured actions by selecting components with action functions (switch, push button, COMM IN, and Modbus IN) using the **up and down arrow keys** and pressing **DISP/ENTER**. The **ESC key** allows you to unselect components with action functions.
- The left and right arrow keys allow you to switch the group number for group control for components with the group attribute.

Screen Transition


Builder screen
Execution screen
Press RUN PNL soft key to transit
Screen configuration
Press FUNC > Builder soft key to transit
Operation screen
Select Screen menu by pressing DISP/ENTER to transit
Trend, etc.
Select Screen menu by pressing DISP/ENTER to transit

For the first screen configuration, select INTERNAL 1 to 3 from the submenu of the screen menu. INTERNAL 1 to INTERNAL 3 are the names of the custom display screens stored in the DX recorder's internal memory. This screen name is displayed even when not building a screen.

▶ For saving and reading screen data, see Chapter 3.

Precaution regarding the display processing time

Custom display screens that are created can take time to appear. If this is the case, saving of measured data and output of communication data will occur correctly, but please be aware of the following.

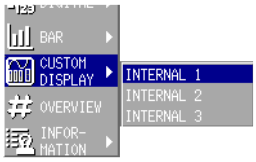
- Key operations cannot be performed until display processing is finished.
- If an event associated with an event action occurs, processing of the event can be delayed until the display processing is completed.
- Web screen updating can be slower.

Operation Flow (operation guide)

This section briefly explains the operation to display the builder screen, then create components, and finally display the execution screen. Here, the creation of digital components is taken as an example.

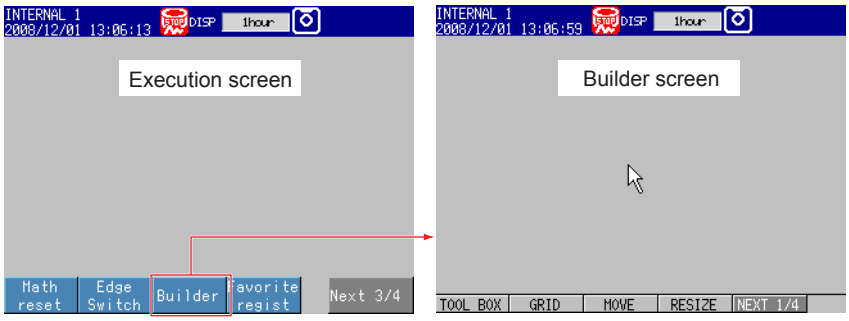
Display the builder screen (see section 1.2)

1. Press **DISP/ENTER** and use any **arrow keys** to select the **[CUSTOM DISPLAY]**.
2. Use any arrow keys to select one of the submenus, **[INTERNAL 1]** to **[INTERNAL 3]**, and press **DISP/ENTER**.



The execution screen appears first.

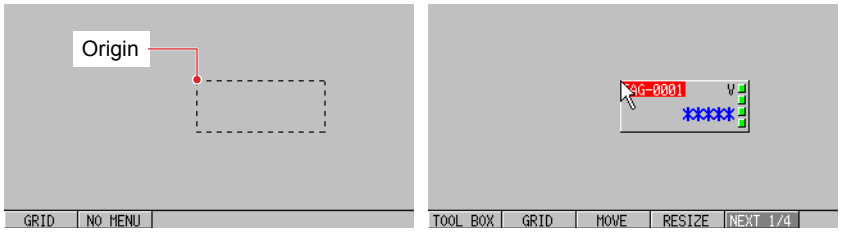
3. Press **FUNC** to display the soft key menu, and press the **Builder soft key**.
The builder screen appears.



Create Components (see section 1.4)

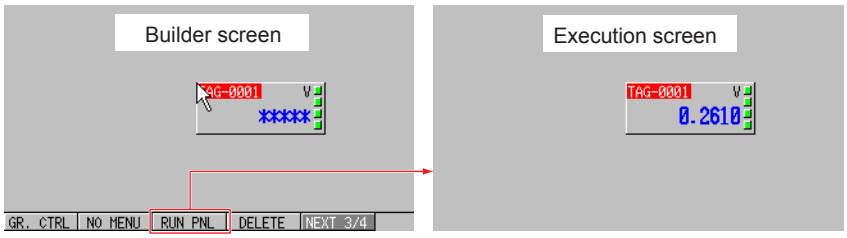
4. Press the **TOOL BOX soft key** and then press the **DIGITAL soft key**.
The digital component is selected.

5. Use the **arrow key** to specify the size of a digital component, and press **DISP/ENTER** to confirm.
You may specify the size from the origin toward the lower right.



Display the Execution Screen (see section 1.13)

6. Press the **RUN PNL soft key**.
The execution screen appears. To go back to the builder screen, perform Operation 3.

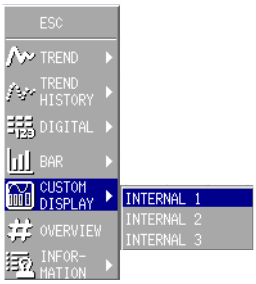


Operation completed

1.2 Display the Builder Screen

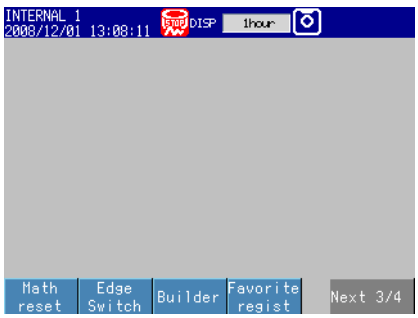
Procedure

1. Press **DISP/ENTER**.
   The screen menu appears.
2. Use the **up and down arrow keys** to select the CUSTOM DISPLAY, and press the **right arrow key**.
   The submenu appears.

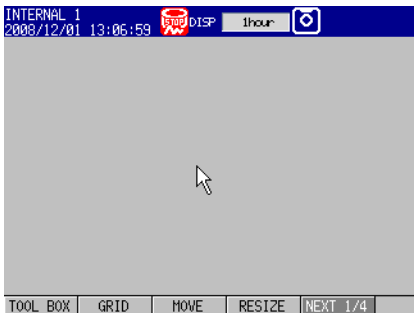


3. Use the **up and down arrow keys** to select one of the submenus, **[INTERNAL 1]** to **[INTERNAL 3]**, and press the **DISP/ENTER**.
   The execution screen appears.

4. Use the **FUNC** to display the **Builder soft key** on the function menu.



The builder screen appears.



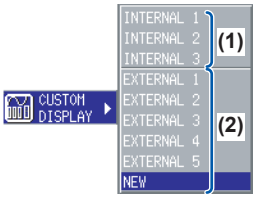
Note

[Builder screen] on the function menu

- This might not be displayed depending on the user restriction setting.
- If key lock is activated, selecting this key will return an error.

Explanation

The submenu shows screen names registered in the internal memory and external storage media (CF card).



- Submenu (1) shows screen names of custom display registered in the internal memory. Up to 3 screens can be registered in the internal memory.
- Submenu (2) shows screen names of custom display registered in external storage media (CF card). Up to 25 screens can be registered in a CF card.

▶ For saving and reading screen data, see Chapter 3.

Note

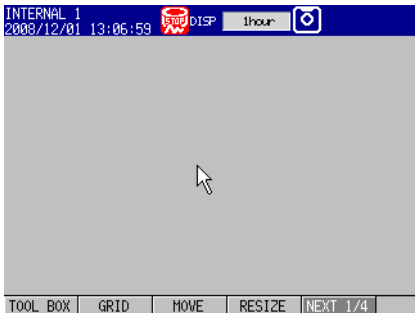
- You can change the order of the submenus by using the menu customization function (▶ IM04L41B01-01E, or IM04L42B01-01E).
- When loading a custom display screen created in DXAdvanced R4 on a DXAdvanced R3 instrument, components and attributes newly available in R4 are ignored.

1.3 Set Grid (Cursor Movement Interval)

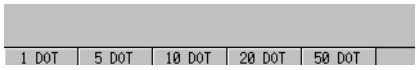
Cursor moves at defined grid intervals. No grid appears on the screen.

Procedure

1. Press the **GRID soft key**.
   The grid interval menu appears.



2. Press the **soft key** for a grid interval to be set.
   You can move the cursor at the defined grid intervals.

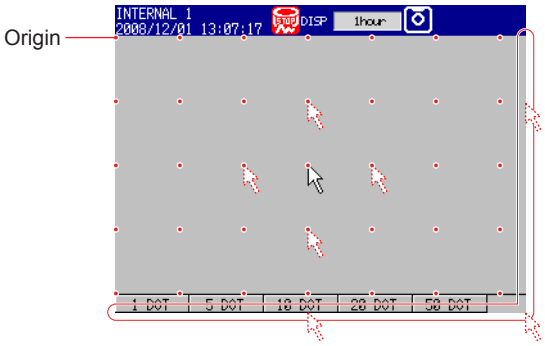


Explanation

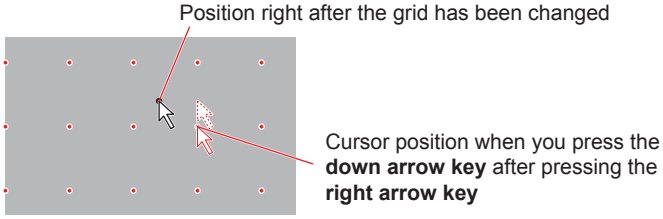
Range of Grid Setting

You can select the grid from 1, 5, 10, 20, and 50 dots.

Setting the upper left-hand corner of the builder screen as an origin, the grid is set at defined dot intervals.
The cursor stops at the right-hand edge and bottom edge on the builder screen even without a grid.



Immediately after changing the grid setting, the cursor may not be positioned on the grid. In this case, press one of the left or right arrow keys once and then press one of the up or down arrow keys to stop the cursor on the grid. (The same happens if you press the up or down arrow keys first and then the left or right arrow keys.

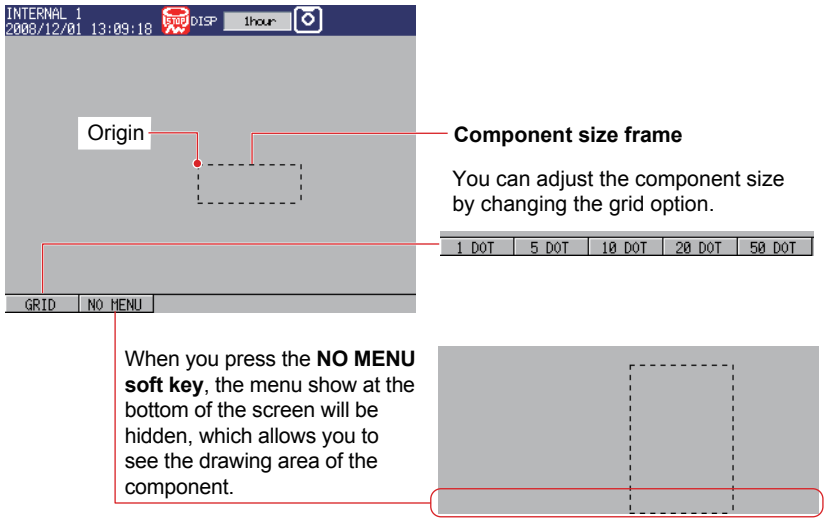

Position right after the grid has been changed
Cursor position when you press the down arrow key after pressing the right arrow key

1.4 Create Components

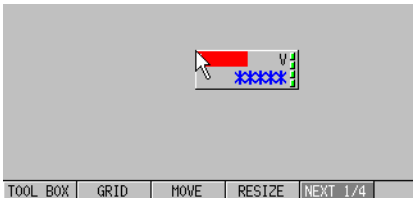
▶ For details of each component, see “Chapter 2. Advanced Settings of Screen and Component.”

Procedure

1. Use the **arrow key** to move the cursor to the point where you want to create components.
   You may move the cursor after creating components.
2. Press the **TOOL BOX soft key**.
   The soft key menu for each component appears.
3. Press the **soft key** for components to be created.
4. Use the **arrow key** to manipulate the component size frame and determine the size.
   You may change the size after creating components.
   - You can manipulate the component size frame only toward the llower-right corner from the origin.


INTERNAL 1
2008/12/01 13:09:18
DISP
1hour
Origin
Component size frame
You can adjust the component size by changing the grid option.
1 DOT
5 DOT
10 DOT
20 DOT
50 DOT
GRID
NO MENU
When you press the NO MENU soft key, the menu show at the bottom of the screen will be hidden, which allows you to see the drawing area of the component.

5. Press **DISP/ENTER**.
   Components are created.



Explanation

Number of Components Which Can be Created on One Screen

Limitations exist according to the component type. If you attempt to create components exceeding the number of components which can be created, an error message will appear to prevent you from creating components.

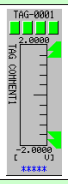
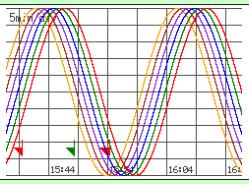
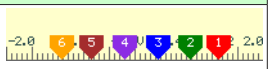
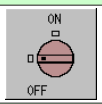
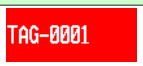
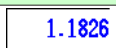
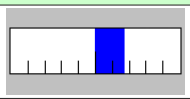
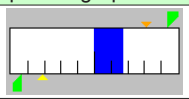
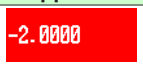
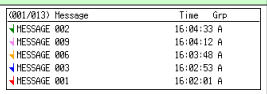
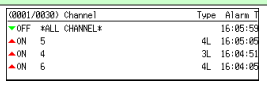
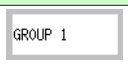
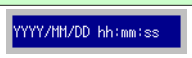
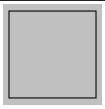
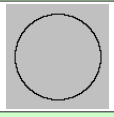
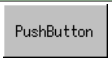
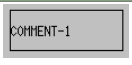
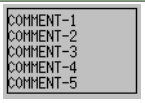
Error message: Cannot create object. The maximum allowed number was exceeded.
Number of components which can be created on one screen: See “ID number of components” on pages 1 to 7.

Arrangement Order

Components are placed to the front in the order of creation time. The last created component is placed in the foreground.

Component List

The order of the following parts is the order of soft keys displayed when creating DX recorder parts.

Digital 	**Bar** You can set items to display on the vertical and horizontal axes. 	**Trend** You can set items to display on the vertical and horizontal axes. 	**Scale** You can set items to display on the vertical and horizontal axes. 
Switch You can select from nine different switch types. 	**Label** You can specify vertical or horizontal direction. 	**Tag** (If there is no tag No.) You can specify vertical or horizontal direction. **Tag No./ Tag Comment** (If there is tag No.) You can specify vertical or horizontal direction. 	**Simple digital** 
Simple bar You can set items to display on the vertical and horizontal axes. 	**Alarm mark** This component displays an alarm setting point on the simple bar graph. 	**Units** You can specify vertical or horizontal direction. 	**Alarm indicator**
Span lower limit/ Span upper limit 	**Message list** 	**Alarm List** 	**Bitmap**
Group name You can specify vertical or horizontal direction. 	**System icon** You can display information in the status area using icons. 	**Memory bar** You can display the progress of memory sampling of display data or event data in a bar. 	**Time label** You can specify vertical or horizontal direction. 
Batch group number You can specify vertical or horizontal direction. 	**Batch name** You can specify vertical or horizontal direction. 	**Line** 	**Rectangle** 
Circle 	**Push button** 	**Comment box** 	**Comment block** You can specify vertical or horizontal direction. 
COMM IN 	**Modbus In** 		

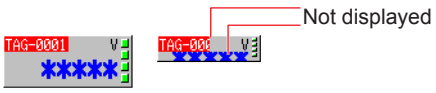
ID Number of Components

When a component is created, an ID number is assigned for identifying it. The ID number is assigned in the order of creation and varies depending on the component type as follows:

Component type	Component name	Update cycle	ID number	Number of components which can be created on one screen
Components for channel assignment	Digital	1 sec.	0 to 79	80
	Bar	1 sec.		
	Tag No.	None		
	Tag comment (Tag)	None		
	Simple digital	1 sec.		
	Simple bar	1 sec.		
	Alarm mark	1 sec.		
	Unit	None		
	Alarm indicator	1 sec.		
	Span L	None		
	Span U	None		
Status display component	System icon	1 sec.		
	Memory bar	1 sec.		
	Time label	1 sec.		
	Batch group number	None		
	Batch name	None		
	Group name	None		
Label components	Label	None		
Components with action functions	Push button	None		
	Switch	1 sec.		
	COMM IN	1 sec.		
	Modbus In	1 sec.		
Components for comment display	Comment box	None		
	Comment block	None		
Components for list display	Alarm list	1 sec.	80 to 83	4
	Message list	1 sec.		
Components for trend display	Trend	Display update rate	84 to 87	4
Scale components	Scale	Measurement interval	88 to 91	4
Diagram components	Line	None	92 to 131	40
	Rectangle	None		
	Circle	None		
Components for static image display	Bitmap	None	132 to 133	2

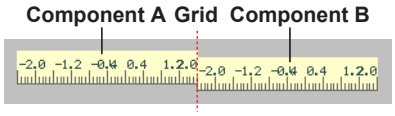
Component Text String Display Restriction

If component text strings go outside the display area, the text strings out of the area are not displayed.



Overlapping of Components

As in the figure below, when components A and B are placed side-by-side on the same grid, their sides overlap by 1 dot in width.



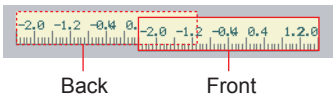
Display When Components Overlap on the Execution Screen

Limitations (A, B, and C) apply when components overlap on the execution screen. If components with the same overlap restriction are overlapping, components placed under the front component (i.e., in the background) are not displayed.

Overlap restriction	Component name (attribute conditions)
None	Digital, bar, scale (kind: OFF), label, tag No., tag comment, simple digital, simple bar graph, alarm mark, units, alarm indicator, span lower limit, span upper limit, group name, system icon, memory bar, time label, batch group no., batch name, line, rectangle, circle, push button, switch, comment box, comment block, communication input, Modbus imput
A	Scale (kind: ON) Alarm list Message list
B(*)	Scale (kind: bitmap), bitmap
C	Trend

* Overlap restriction B only shows the front component even on the builder screen.

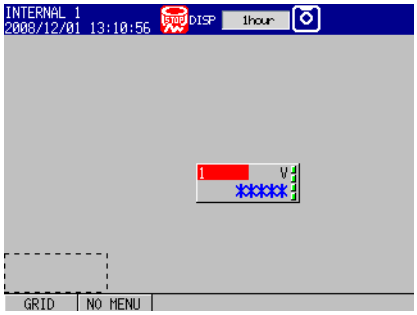
For example, if two components with Overlap restriction A are overlapping on the builder screen, only the front component is displayed on the execution screen.



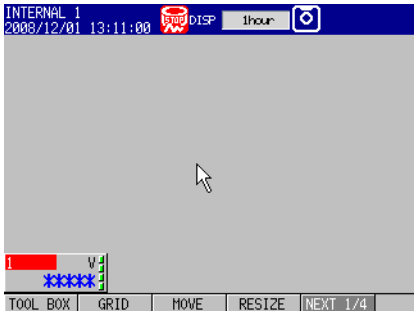
1.5 Move Components

Procedure

1. Use the **arrow key** to place the cursor on the component which you want to move.
2. Press the **MOVE soft key**.
   The movement frame (the component frame becomes a dashed line: ⬚) is displayed.
3. Use the **arrow key** to move the movement frame to the point where you want to place a component.

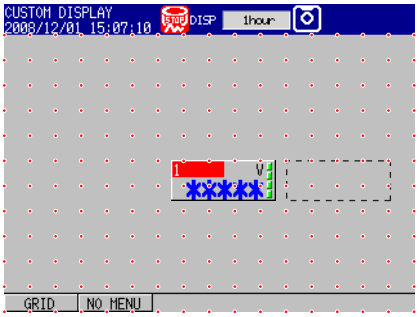


4. Press **DISP/ENTER**.
   The component moves to the specified point.



Explanation

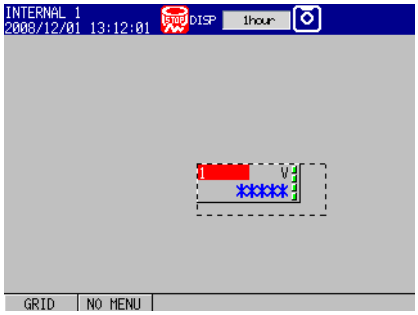
Setting the upper left-hand corner as an origin, components move on the grid. Components do not go over the builder screen (configuration area). Therefore, even if you press the arrow key you may not be able to move the movement frame. In this case, making grid intervals smaller will enable you to move the movement frame.



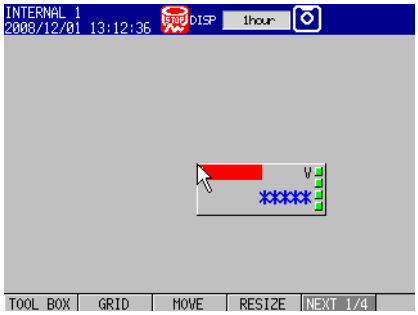
1.6 Change the Component Size

Procedure

1. Use the **arrow key** to place the cursor on the component whose size you want to change.
2. Press the **RESIZE soft key.**
   The component size frame (the component frame becomes a dashed line: ⬚) is displayed.
3. Use the **arrow key** to manipulate the component size frame and determine the size.

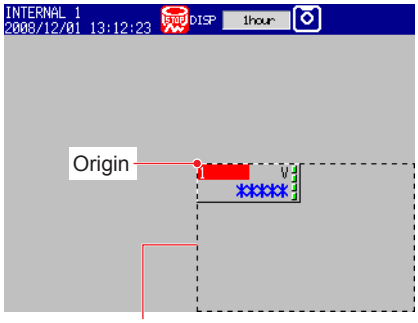


4. Press **DISP/ENTER**.
   The component size is changed.



Explanation

The upper left of a component is fixed as origin. The size changes rightward and downward.

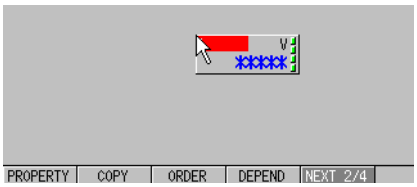


1.7 Display the Attribute Setting Dialog of Components

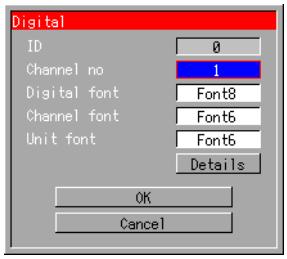
▶ For details of each component, see “hapter 2. Advanced Settings of Screen and Component.”

Procedure

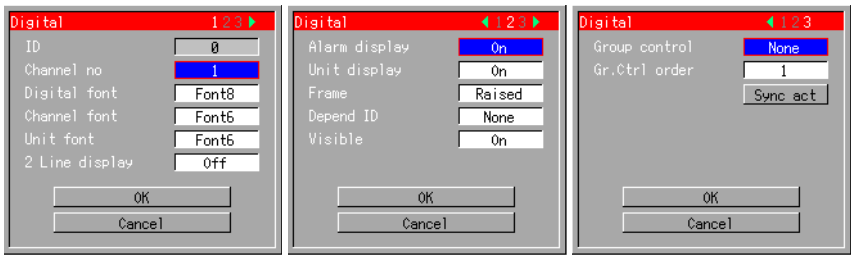
1. Use the **arrow key** to place the cursor on a component.



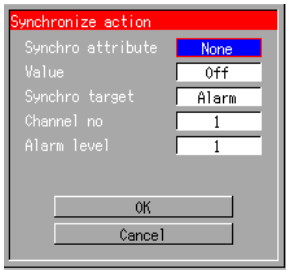
2. Press the **PROPERTY soft key**.
The simple attribute setting dialog appears.



3. Use the **arrow key** to select the **Details button** and press **DISP/ENTER**.
The detail attribute setting dialog appears. Using the left and right arrow keys, you can page a dialog with more than one page.



4. Use the **arrow key** to select the **Sync act button** and press **DISP/ENTER**.
The synchronize action attribute setting dialog appears.



Explanation

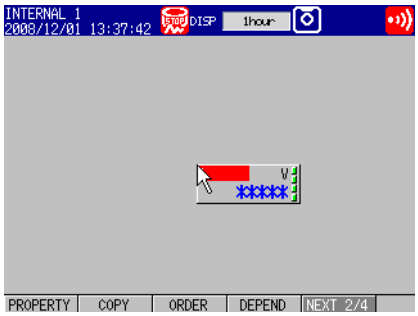
The attribute setting dialog box consists of the following three dialog boxes:

Dialog box	Description
Simple attribute setting	You can set only main attributes.
Detail attribute setting	You can set all attributes.
Synchronize action attribute setting	You can set the visibility of components which are synchronized with the alarm or switch.

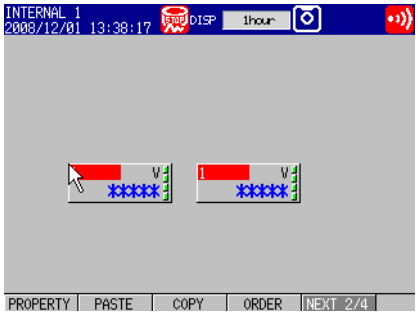
1.8 Copy Components (Copy and Paste)

Procedure

1. Use the **arrow key** to place the cursor on the component which you want to copy.
2. Press the **COPY soft key**.



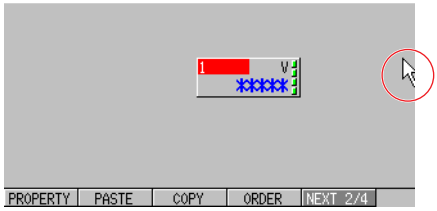
3. Use the **arrow key** to move the cursor to the point where you want to place a component.
4. Press the **PASTE soft key**.
   Copied components are pasted.

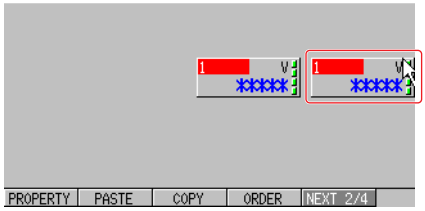


Explanation

All contents to be copied are attribute information excluding the ID, depend ID, group control, and Gr.ctrl order. The ID number is assigned in the order of component creation. If you attempt to create components exceeding the number of components which can be created, you cannot copy any component.

If you press the **PASTE soft key** at the cursor position shown in the lower left figure, a component is placed as the lower right figure shows. A component is placed so that it does not go over the screen.



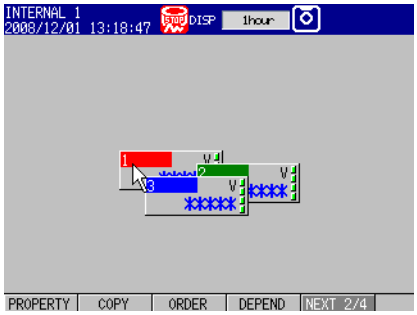


1.9 Change the Component Arrangement Order

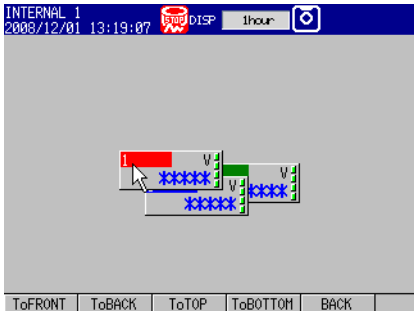
You can change the arrangement of a specified component to the front or back.

Procedure

1. Use the **arrow key** to place the cursor on the component whose arrangement order you want to change.



2. Press the **ORDER soft key**.
   The soft key menu (ToFRONT, ToBACK, ToTOP, ToBOTTOM, BACK) appears.
3. Press the relevant **soft key**.
   Components are arranged in accordance with the selected soft key.



Explanation

Components are placed to the front in the order of creation time. The last created component is placed on top.

Soft Key Menu

ToFRONT: Move to the front by one component.
ToBACK: Move to the back by one component.
ToTOP: Move to the top.
ToBOTTOM: Move to the bottom.
BACK: Cancel the change to the arrangement order and go back to the original screen.
(The **BACK soft key** does not revert any change in component arrangement to the original arrangement order.)

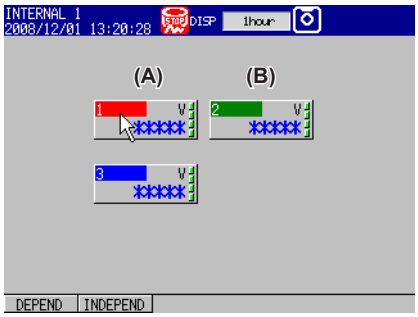
1.10 Have the Visibility Attribute of a Component Depend on Another Component

This section explains the operation using the soft key.

▶ It is also possible to set dependency based on individual components attributes. See Chapter 2.

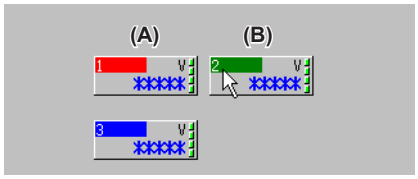
Procedure

1. Use the **arrow key** to place the cursor on the component which you want to subordinate (A).
2. Press the **DEPEND soft key**.
   The soft key menu appears.



3. Press the **DEPEND soft key**.

4. Use the **arrow key** to place the cursor on the component which is depended on (B).



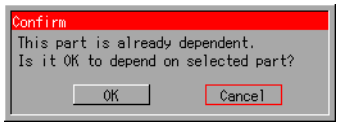
5. Press **DISP/ENTER**.
   The visibility attribute of the component (A) depends on that of the component (B).

To Release Dependency:

1. Place the cursor on the depending component and then press the **DEPEND soft key**.
2. Press the **INDEPEND soft key**.
   Dependency relationship is released.

To Change the Component Which is Depended on:

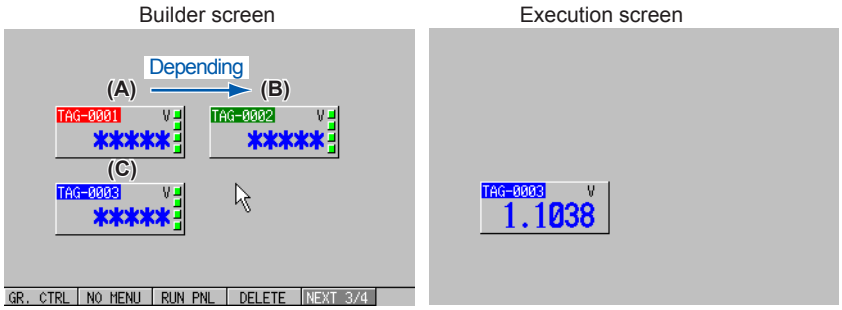
1. Place the cursor on the depending component and then press the **DEPEND soft key**.
   The following dialog appears:



2. Select **[OK]**.
3. Use the **arrow key** to place the cursor on the component which you want to depend on.
4. Press **DISP/ENTER**.
   The component which is depended on is changed.

Explanation

As shown in the below figure, if where the visibility attribute of component (A) is depending on that of component (B), when you set the visibility attribute of component (B) to Off, the visibility attribute of component (A) will be turned off as well. In this case, only component (C) will be displayed on the execution screen.



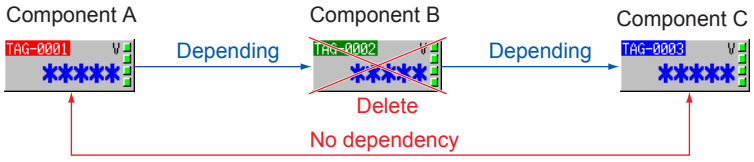
The following section provides explanations by referring to a component depending on another component as the "**depending component**" and a component which is depended on as the "**depended component**".

If a depended component is subordinated to another component:

If a depended component is subordinated to another component, the original dependency relationship is contained in the newly created depending component. In the case of the figure below, components A and B depend on component C.

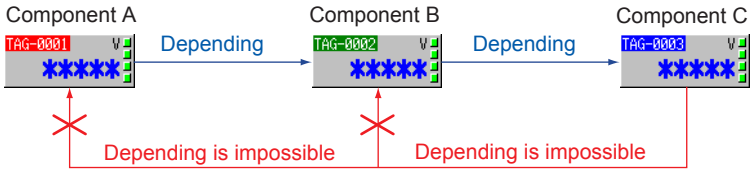
If a depended component is deleted:

If a depended component is deleted, its depending component loses the dependency relationship. In the case of the figure below, if component B is deleted, no dependency relationship exists between component C and A.



If an attempt is made to subordinate a depended component to a depending component:

Any depended component cannot depend on its depending component. In the case of the figure below, component C cannot depend on component A or B. (No dependency relationship can be circulated.)



1.11 Register Components in the GR. CTRL

It is a function that switches the display of components created by each display group. In the Gr. Ctrl dialog, you will be able to list or edit the settings configured by attribute of each component. This section explains the operation using the soft key menu.

▶ You will configure the group control based on individual component's attributes. See Chapter 2 and Appendix 1.

Procedure

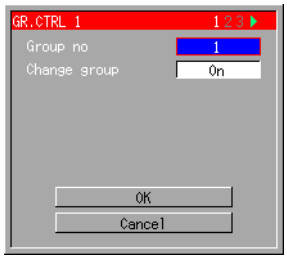
1. Pres the **Gr. Ctrl soft key**.
2. Press the **soft key** for the Grp control number to be registered.

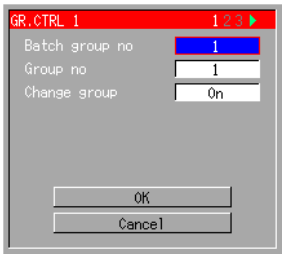
   GR.CTRL 1 | GR.CTRL 2 | GR.CTRL 3 | GR.CTRL 4

   The Grp control dialog appears.
3. Set the batch group number*, group number, and switching groups using the **soft key**.

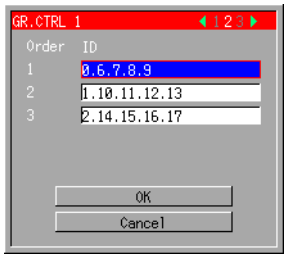
   * The batch group number is displayed when the Multi batch (additional specifications/ BT2) is valid.

   When the Multi batch /BT2 is valid





4. Use the **right arrow key** to display the second page.
5. Enter the ID number for components to be managed as a group.



6. Use the **arrow key** to select **[OK]** and press **DISP/ENTER**.

Explanation

If components are managed as a group, you can switch channels to be displayed by switching groups on the execution screen with the left and right arrow keys.

- You can switch the group number of components which contain the group number as an attribute (trend and scale).
- You can switch the channel number of components which only contain the channel attribute (channel number).

Batch group no

Setting range: From 1 to the number of Multi batches defined in the basic setting

Group no

Setting range:

If the multiple batch is Off, DX1000 is between 1 and 10 and DX2000 is between 1 and 36.

If the multiple batch is On, DX1000 is between 1 and 6 and DX2000 is between 1 and 12.

Switching groups

On: When you press the left or right key in the execution panel, the group number display switches.

Off: If you press the left or right key in the execution panel, the group number display does not switch.

Order

It is an order of channel configured for each display group. For example, if “003, 004, 005” is configured for display group 1, the order 1 of group number 1 is CH3, the order 2 corresponds to CH4, and the order 3 corresponds to CH5 respectively.

Setting range: 1 to 6 for DX1000 and 1 to 10 for DX2000

Here is the explanation using the display group setting and the dialog below as an example.

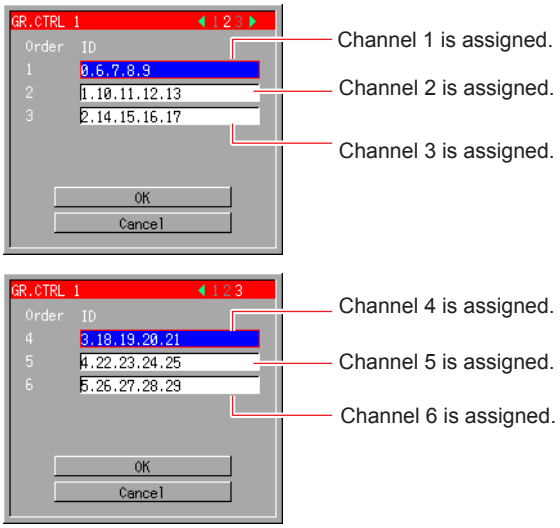
A channel configured at the first channel in the display group 1 will be assigned to the ID registered in the order of (0, 6, 7, 8, 9), which is registered at the order 1 of group number 1. You can also switch groups using the left and right arrow keys on the execution screen. (You can switch channels of components registered at the order 1, which is in the order of “1”, “7”, “3”, and “101”.)

Display Group Setting Example

Order	Group number			
	1	2	3	4
1	1	7	3	101
2	2	8	5	102
3	3	9	8	No setting
4	4	10	1	No setting
5	5	11	4	No setting
6	6	12	7	No setting

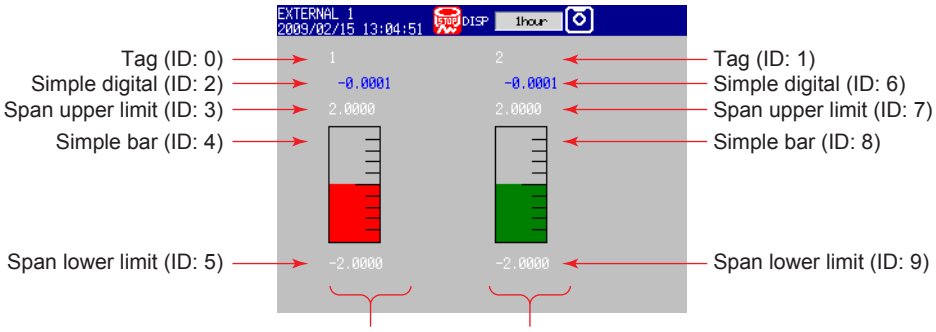
In the bold frame, you will see channels assigned for each display group.

If “no setting” is assigned to a component, only the frame is displayed. For example, only the frame will be displayed for the component (ID) registered at the order 3 of group number 4.



Example for Group Control Settings

In the screen showing a bar graph of the measured values from 2 channels, the measured values displayed depend on the display groups as follows: display group 1 = ch 1 and ch 2; display group 2 = ch 3 and ch 4; display group 3 = ch 5 and ch 6; display group 4 = ch 7 and ch 8.

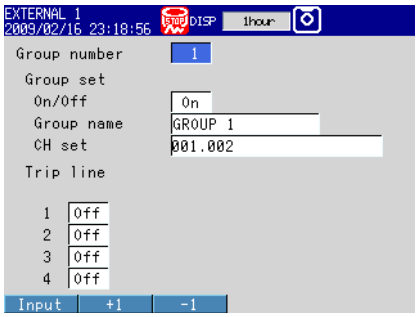


Display group 1 shows:	Channel 001	Channel 002
Display group 2 shows:	Channel 003	Channel 004
Display group 3 shows:	Channel 005	Channel 006
Display group 4 shows:	Channel 007	Channel 008

- **Setup Screen and Setup Items**

  Display Group Settings

  Press **MENU** (to switch to setting mode), and select the **Menu** tab > **Group set, Trip line**



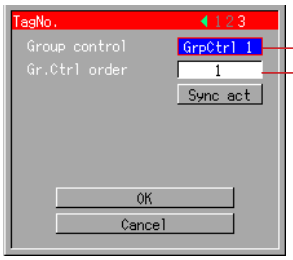
Group number	CH set
1	001.002
2	003.004
3	005.006
4	007.008

Group 5 and group 6 are set to **Off**.

Group Control Settings

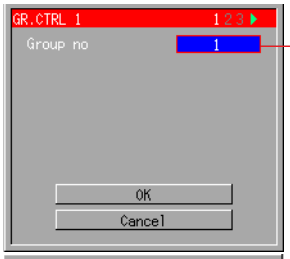
Group control is set up in the attribute dialog boxes of each individual component.

Tag (ID:0) attribute setting dialog box

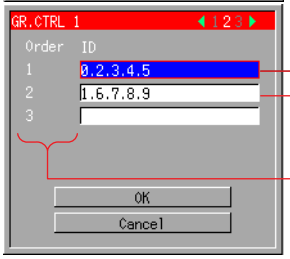


Uses **GR. CRTL 1**.
Because this component is associated with the first registered channel of each display group, set **1**.

The settings can be displayed in the GR. CTRL. dialog box. They can also be edited.



This is the group number displayed when moving to the execution screen. When switching the display group in the execution screen, this number also changes to the displayed group number.



These are the IDs of the components associated with the channel registered first in each display group.
These are the IDs of the components associated with the channel registered second in each display group.
Order means the order of channel registrations in the display group settings. In this example, channels 001, 003, 005, and 007 are registered to order 1.

<Operation>

By repeatedly pressing the right arrow key, the screen changes in the order: display group 1 -> display group 2 -> display group 3 -> display group 4 -> display group 1… and so on. Pressing the left arrow key changes the screens in reverse order. Display groups turned Off in the group settings do not appear among the switched screens.

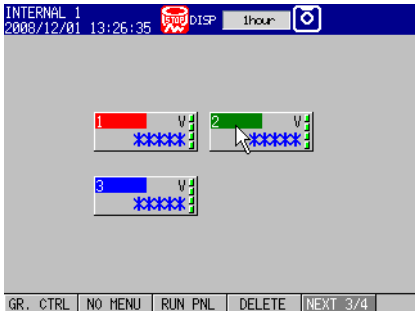
1.12 Delete Components

To delete components, you delete either a specified component (one component) or all components on the screen.

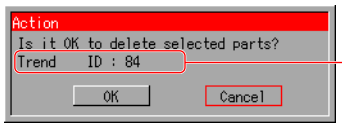
Procedure

To Delete a Specified Component:

1. Use the **arrow key** to place the cursor on the component which you want to delete.



2. Press the **DELETE soft key**.
   The confirmation dialog appears.

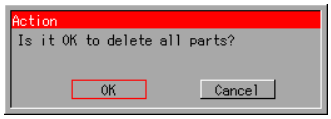


Kind and ID number of the component to be deleted

3. Use the **arrow key** to select **[OK]** and press **DISP/ENTER**.
   The specified component is deleted.

To Delete All Components:

1. Press the **Delete all soft key**.
   The confirmation dialog appears.



2. Use the **arrow key** to select **[OK]** and press **DISP/ENTER**.
   All components on the builder screen are deleted.

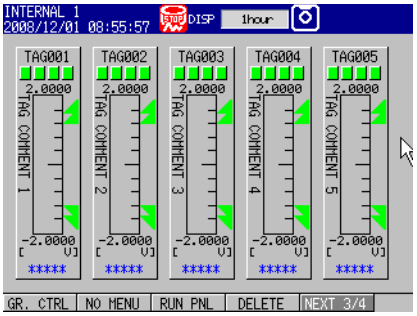
1.13 Other Operations

To Display the Execution Screen:

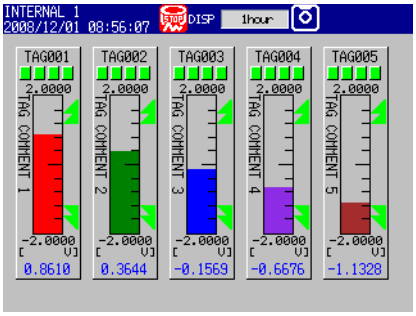
Press the **RUN PNL soft key**.

The execution screen appears.

Builder screen



Execution screen

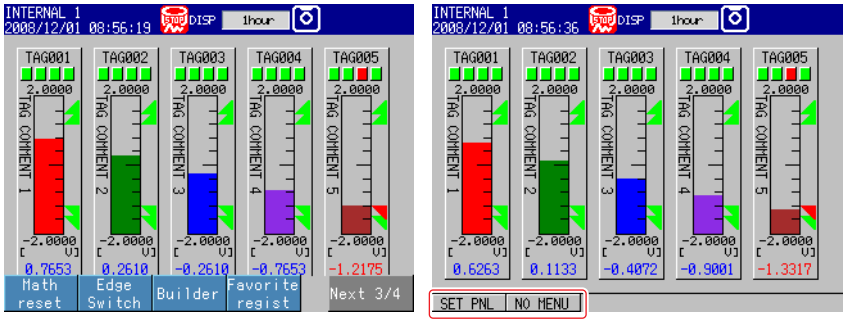


To Go Back to the Builder Screen:

Press **FUNC,** and press the **Builder soft key**.

If the screen attribute runtime menu is on, the soft key menu is displayed on the lower left hand on the execution screen. Then, press the **Builder soft key**.

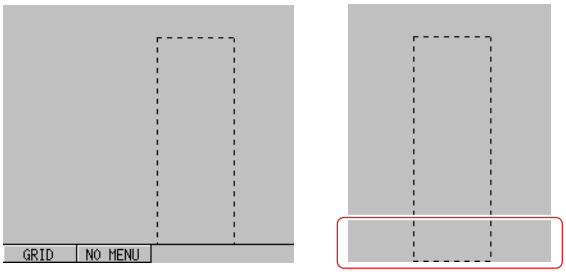
If the screen attribute runtime menu is ON



To Hide the Menu:

Press the **NO MENU soft key**.

The soft key menu is hidden and the bottom end of the screen becomes visible.



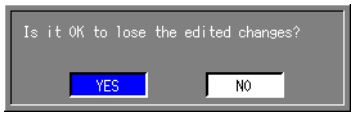
To show the soft key menu, press **ESC**.

If the soft key menu is hidden, it is disabled.

To Update an Edited Screen:

When editing the internal memory data displayed on the custom screen submenu, the screen data is saved in the internal memory. But if editing data in an external storage medium, if you attempt to move to another screen, a message appears.

▶ For an explanation of data from internal and external storage media, see section 1.2.



After editing the [Create], or [EXTERNAL 1] through [EXTERNAL 25] screens, be sure to update the screen. If you do not update the screen, the edited data will be lost.

Press the **Update soft key** after editing a screen.

If you try to go to another screen without updating, the above caution dialog appears. If you want to update the screen, select “No” to go back to the builder screen being edited.

Operations which show the caution dialog

Operations	Description
DISP/ENTER key	Displays the screen menu
START key	Memory start action/ start screen display
MENU key	Displays the setting menu
FUNC key > system information soft key	Displays the system information screen
FUNC key > network information soft key	Displays the network information screen
FUNC key > text field soft key	Displays the text field screen

Note

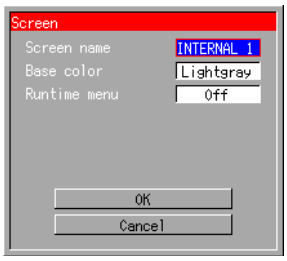
- The screen can be changed by using the communication commands or by using screen change with the event action/start. However, screen data being edited will be lost.
- If any USB memory is inserted while a screen is being edited in external storage media (CF card), the USB memory operation selection screen does not appear.
- While data is being edited on the builder screen, the following actions do not work:
  - Automatic screen recovery
  - Event action favorite key action
  - FAVORITE key (shows error E157)

2.1 Screen Attribute

This section shows you how to configure attributes associated with screen name, base color and runtime menu.

Precedure

1. On the builder screen, place your cursor in an area where there is no component.
2. Press the **PROPERTY soft key**.
   Screen attribute setting dialog appears.

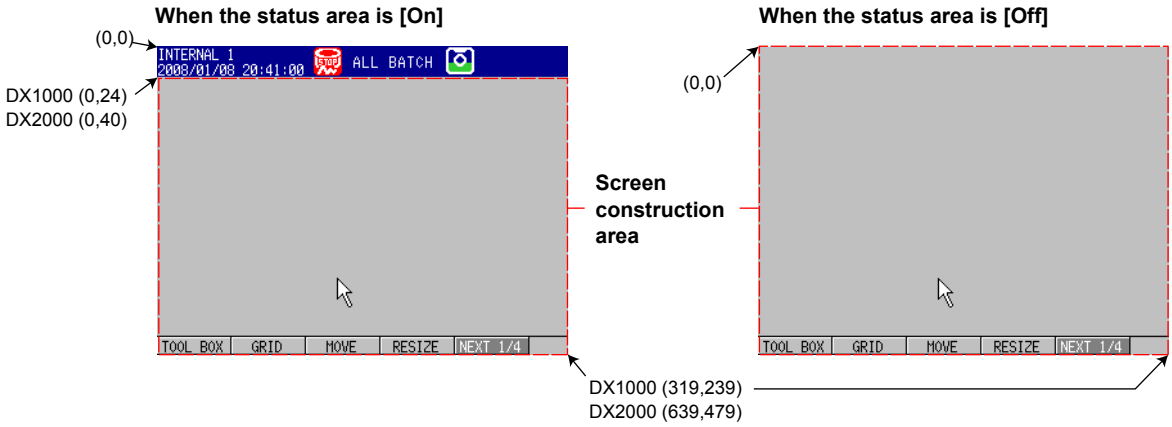


3. Configure each attribute.

Explanation

The below table shows each setting item and description.

Attribute	Description	Default value
Screen name	This attribute will be displayed in the status display on the custom display screen. It will be displayed in the submenu of the screen menu as well. You can enter up to 16 one-byte characters.	
Base color	You can configure the background color of the screen. Display components without any background color will be filled with the color configured here. The colors available are [Lightgray], [Lightblue], [L.orange], [Aquamarin], [Darkgray], [Darkblue], [Darkgreen], [White], and [Black]	Lightgray
Runtime menu	You can choose to show or hide the soft key menu on the execution screen by setting [On] or [Off] at this field. **Soft key menu displayed on the execution screen** [SET PNL] Switch to [Builder screen]. [NO MENU] Temporarily hide the soft key menu. Pressing the [ESC] key will show the soft key menu again.	Off
Status area	Sets [On] or [Off] to indicate whether or not the status area is displayed. When the status area is set to [Off], the screen construction area becomes larger. See the figure below.	On



2.2 Common Attributes of Components

This section explains the common attributes used for multiple components.

Attribute Settings

To fix the setting value, select [OK] in the attribute setting dialog after you have changed the settings of component attributes.

Selection

You will see a selection [SET] in the attribute settings. This indicates a value configured at the setting menu of this device.

Font

The following character types are available.

Font (character size)	Description
Font 5	English one-byte characters. ISO8859-1 (Some symbols are not available.)
Font 6	
Font 8	
Font 12	
Font 16	
Font 32	

Batch Group Number (Additional Specification/BT2: Multi batch Functions Only)

This is an attribute you will be able to configure with trend components, scale components, message list components, alarm list components, Multi batch number components, batch name components and GR CTRL 1 to 4. You can set this attribute when the Multi batch function is turned on. The batch group number configured will be validated when you display a custom display screen in the **batch overview mode**. When you display a custom display screen in the **batch single mode**, the batch group number configured at the attribute will be ignored. In this case, the effective batch group number is that of the individual batch mode.

Frame

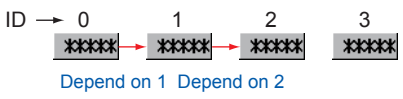
Set the frame of components. You can select [None], [Black], [White], [Raised], or [Sunken].

None Black White Raised Sunken

[None]: no frame; [Black]: solid line black frame; [White]: solid line white frame; [Raised]: convex shaped frame; [Sunken]: concave shaped frame

Depend ID

Set the component ID on which this component is dependent. You can set this field as [None] or select an ID number of the components on the screen. For example, if you have the following components whose IDs are 0 to 3 on the [Builder screen], the IDs you will be able to configure are shown in the below table.



ID	Configurable ID			
0	None	1	2	3
1	None	2	3	
2	None	3		
3	None	0	1	2

▶ You can also configure dependent IDs using the soft key. See section 1.10 for more information about dependent IDs.

Visible

You can choose to show or hide the components on the execution screen.

On: Show components on the execution screen and builder screen.

Off: Hide components on the execution screen. Components will be visible on the builder screen.

You will not be able to change this setting if a component is depending on other components.

Group control

You can configure settings of display group control status.

Setting range

You can select [None], [GR. CTRL 1], [GR. CTRL 2], [GR. CTRL 3], or [GR. CTRL4].

▶ You can also configure group control settings using the soft key. See section 1.11 or appendix 1 for more information about group control.

Gr.Ctrl order (Group control order)

You can configure the group control order. This setting is available when you set anything except [None] for the group control.

Setting range

DX1000 = 1 to 6, DX2000 = 1 to 10

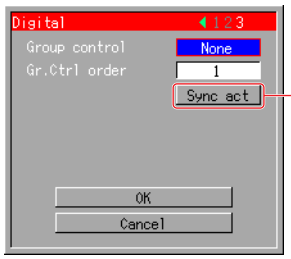
▶ You can also configure group control settings using the soft key. See section 1.11 for more information about group control.

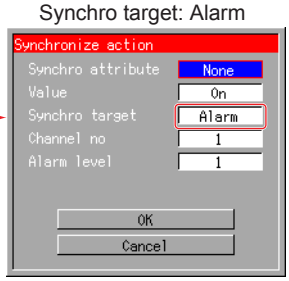
Sync act (Synchronize action)

You can change the show/hide settings of components on the execution screen by synchronizing On/Off settings of alarm or internal switch. You can also enlarge the display of trend components and scale components to an arbitrary span by configuring the 2nd span.

Depend ID configured will invalidate the visible setting at the synchro attribute field.

Synchro target: Alarm





Synchro target: Switch

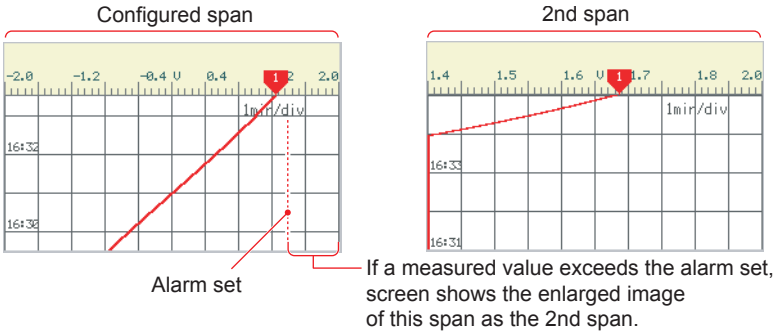
Attribute	Description	Default value
Synchro attribute	Configure the attribute you want to synchronize. You can select None, Visible, or 2nd span. 2nd span is available for trend components and scale components only.	None
Value (switch On)	Configure the synchro attribute value when the synchro target (alarm or switch) is set to On. Select On or Off.	On
Synchro target	Configure the target you want to synchronize. Select alarm or switch.	Alarm
Channel no **or** **Switch no**	Configure channel number or internal switch number you want to synchronize. If the synchro target is an alarm, enter a channel number. If it is a switch, select an internal switch number.	1
Alarm level	Configure the alarm level you want to synchronize. Select any or all of the following setting range: 1, 2, 3, 4.	1

2nd span

This is the attribute available with trend components and scale components only. You can enlarge the display of trend and scale by synchronizing the On/Off settings of alarm or internal switch. To validate the 2nd span, configure [2nd span] at the synchro attribute field. Scale and trend shown in the below figure are an example of displaying the 2nd span when the alarm is set to On.

(Example of settings)

- 2nd span: On; 2nd span Lower: 85.0%, 2nd span Upper: 100.0%
- Synchro attribute: 2nd span; Value (switch On): On; Synchro target: alarm, Channel no: 1; Alarm level: 1



Restrictions on channel assignments

With the Math (/M1) and PROFIBUS-DP (/CP1) options, PROFIBUS-DP always uses the communication input channels in the table below. The channels in the table below cannot be assigned in a custom display.

Channels used with the /M1 and /CP1 option

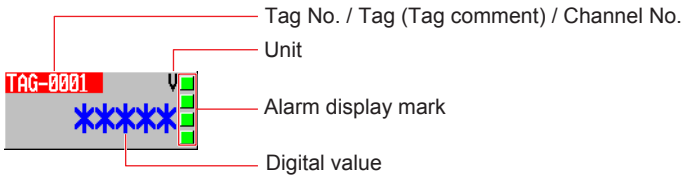
Type	Communication input channels used
DX1000	C01 to C24 (all)
DX2000	C01 to C32

2.3 Attributes of Digital Components

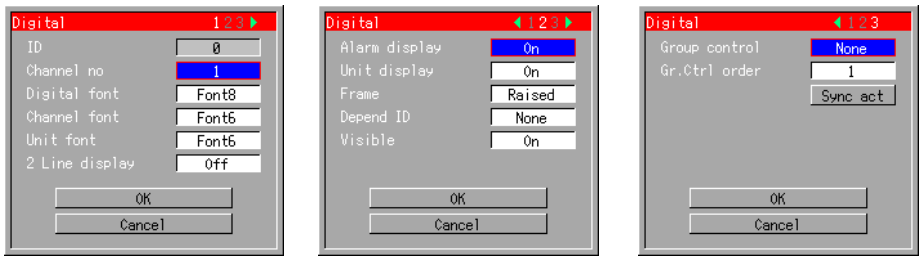
These components are associated with displaying digital values. You can display digital value, tag (tag no., tag comment, or channel no.), unit, and alarm display mark.

Component type (See Section 1.4.)	Channel assignment	Overlap restriction (See Section 1.4.)	None	Update cycle	1 sec.

Name of Each Component



Attribute Setting Dialog



List of Attributes

Attribute	Description	Default value
ID	Number automatically assigned for component identification.	0 to 79
Channel no	Set the channel number to be assigned. You can configure this field when the group control is set to [None].	1
Digital font	Set the character size of digital value. You can select [Font 5], [Font 6], [Font 8], [Font 12], [Font 16], or [Font 32].	Font 8(DX1000) Font 12(DX2000)
Channel font	Set the character size of tag no., tag comment, and channel no. You can select [Font 5], [Font 6], [Font 8], [Font 12], or [Font 16].	Font 6(DX1000) Font 8(DX2000)
Unit font	Set the character size of unit font. You can select [Font 5], [Font 6], [Font 8], [Font 12], or [Font 16]. Note that this field will not be available when [Unit display] field is set to [Off].	Font 6(DX1000) Font 8(DX2000)
2 Line display	You can choose to display the character strings for channel font in 2 lines by setting [On] or [Off].	Off
Alarm display	You can choose to show or hide the alarm display mark by setting [On] or [Off] at this field. The alarm display mark corresponds to level 1, level 2, level 3, and level 4 respectively from the top. When alarm is set to [Off], it is displayed in lime. When alarm is [On], it will be displayed in a color configured for each level (red, orange, yellow, or pink).	On

Continued on next page

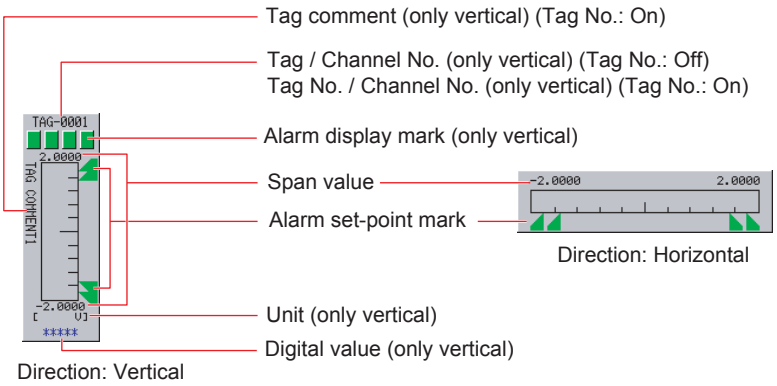
Attribute	Description	Default value
Unit display	You can choose to show or hide the unit display by setting [On] or [Off].	On
Frame	Set the frame of a component. ▶See Section 2.2.	Raised
Depend ID	Set the ID number of the component on which this component is dependent. ▶See Section 2.2.	None
Visible	You can choose to show or hide this component by setting [On] or [Off]. ▶See Section 2.2.	On
Group control	Set the control status of group displayed. ▶See Section 1.11 and Section 2.2.	None
Gr.Ctrl order	Set the control order of group displayed. ▶See Section 1.11 and Section 2.2.	1
Sync act	▶See Section 2.2.	

2.4 Attributes of Bar Graph Components

These components are associated with displaying a bar graph. You can display tag no., tag comment, channel no., span, unit, alarm display mark, and alarm set-point mark.

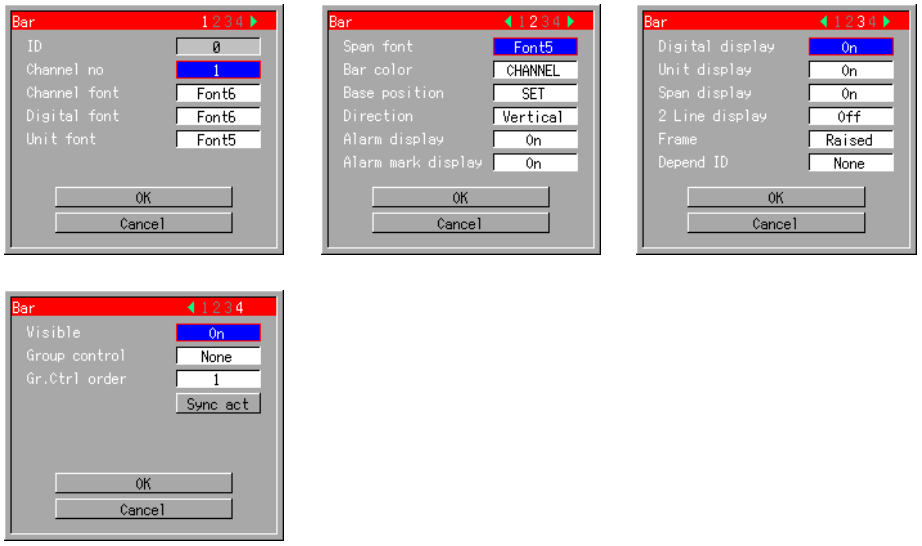
Component type (See Section 1.4.)	Components for channel assignment	Overlap restriction (See Section 1.4.)	None	Update cycle	1 sec.

Name of Each Component



Attribute Setting Dialog

When Tag No. is set to On, the following attribute setting dialogs appear.



List of Attributes

Attribute	Description	Default value
ID	Number automatically assigned for component identification.	0 to 79
Channel no	Set the channel number to be assigned. You can configure this field when the group control is set to [None].	1
Channel font	Set the character size of Tag No., Tag, or Channel No. When the Tag No. is set to On, it shows the Tag No. or Channel No. When Tag No. is set to Off, it shows the Tag or Channel No. You can select [Font 5], [Font 6], [Font 8], [Font 12], or [Font 16]. Note that this field will not be available when the direction is set to [Horizon].	Font 6(DX1000) Font 8(DX2000)

Continued on next page

Attribute	Description	Default value
Tag font (Displayed only when Tag No. is set to On.)	Set the character size of tag comment. (Available font types are same as those for channel font.) Note that this field will not be available when the direction is set to [Horizon].	Font 6
Digital font	Set the character size of digital value. You can select [Font 5], [Font 6], [Font 8], [Font 12], [Font 16], or [Font 32]. Note that this field will not be available when the direction is set to [Horizon].	Font 6(DX1000) Font 8(DX2000)
Unit font	Set the character size of unit font. (Available font types are same as those for channel font.) Note that this field will not be available when the unit display is set to [Off] or the direction is set to [Horizon].	Font 5
Span font	Set the character size of span value. (Available font types are same as those for channel font.) Note that this field will not be available when [Span display] field is set to [Off].	Font 5
Bar color	Set the color of a bar. You can select either [CHANNEL] or [Green]. If you select [Green] at this setting, the bar will be displayed in a color of the alarm when the alarm goes off.	CHANNEL
Base position	Set the base position of a bar graph. You can select [SET], [Normal], [Center], [Lower], or [Upper].	[SET]
Direction	Set the direction of a bar graph. You can select either [Vertical] or [Horizon]. The default value will depend on the aspect ratio of component size drawn.	Depend on the aspect ratio of component size Length ≥ Width: Vertical Length < Width: Horizon
Alarm display	You can choose to show or hide the alarm display mark by setting [On] or [Off] at this field. From left, it is level 1, 2, 3, and 4 respectively. When alarm is set to [Off], it is displayed in lime. When alarm is [On], it will be displayed in a color configured for each level (red, orange, yellow, or pink). Note that this field will not be available when the direction is set to [Horizon].	On
Alarm mark display	You can choose to show or hide the alarm set-point mark by setting [On] or [Off] at this field.	On
Digital display	You can choose to show or hide the digital value by setting [On] or [Off].	On
Unit display	You can choose to show or hide the unit display by setting [On] or [Off].	On
Span display	You can choose to show or hide the span display by setting [On] or [Off].	On
2 Line display	You can choose to display the tag (tag comment) in two lines by setting [On] or [Off]. (The character strings for channel font will be displayed in two lines. When the Tag No. is set to On, the character strings for tag font will be displayed in two lines.)	Off
Frame	Set the frame of a component. ▶See page 2-2.	Raised
Depend ID	Set the ID number of the component on which this component is dependent. ▶See Section 2.2.	None
Visible	You can choose to show or hide this component by setting [On] or [Off]. ▶See Section 2.2.	On
Group control	Set the control status of group displayed. ▶See Section 1.11 and Section 2.2.	None
Gr.Ctrl order	Set the control order of group displayed. ▶See Section 1.11 and Section 2.2	1
Sync act	▶See Section 2.2	

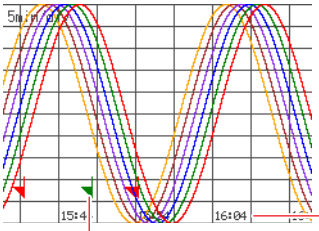
2.5 Attributes of Trend Components

These components are associated with displaying a trend. You can select either [Vertical] or [Horizon] for the wave direction.

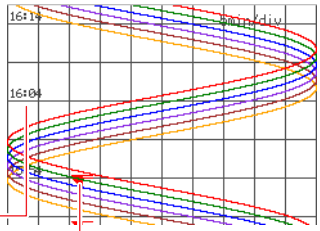
Component type (See Section 1.4.)	Trend display	Overlap restriction (See Section 1.4.)	C	Update cycle	Display update rate

Name of Each Component

Direction: Horizontal



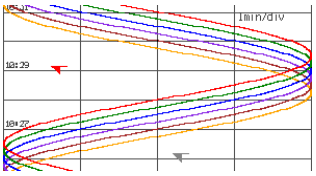
Direction: Vertical



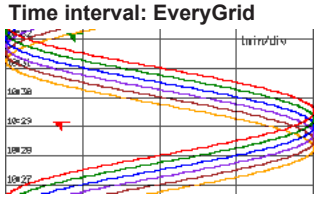
GRID time

Message mark

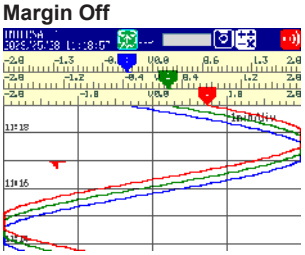
Time interval: Alternate



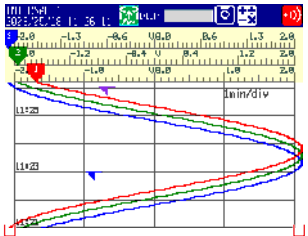
Time interval: EveryGrid



Margin Off

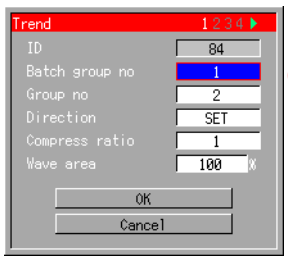


Margin On

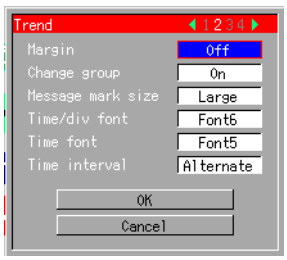


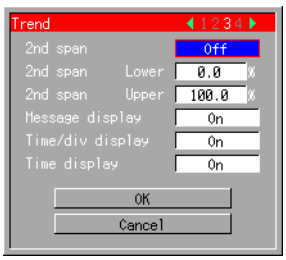
Margin

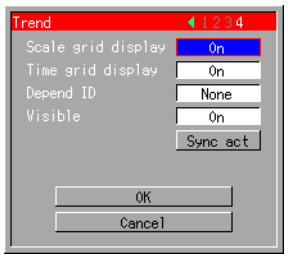
Attribute Setting Dialog



(*)







* Batch group no. will be displayed only when Multi batch (additional specifcations /BT2) is valid.

List of Attributes

Attribute	Description	Default value
ID	Number automatically assigned for component identification.	84 to 87
Batch group no only with additional spec. /BT2	Set the batch group number. The batch number needs to be within the range from [1] to number of Multi batch configured at the basic settings. The batch group number will be displayed only when Multi batch is valid.	1
Group no	Set the group number. **Multi batch Off** You can select a number from [1] to [10] for DX1000, [1] to [36] for DX2000. **Multi batch On** You can select a number from [1] to [6] for DX1000, [1] to [12] for DX2000.	1
Direction	Set the direction of trend display. You can select [SET], [Horizon], or [Vertical].	SET
Compress ratio	Set the ratio of rendering 1 dot data. You can select [1], [2], [4], [5], [6], [7], or [8].	1
Wave area	Set the ratio used for displaying a wave to the width of temporal axis direction as 100%. You can select [100], [90], [80], [70], [60], or [50].	100
Margin	Sets whether or not to display a margin on both sides in the direction of the span. [On]: Margin of 3% of component width is added in the direction of the span [Off]: The margin is not displayed	Off
Change group	Sets whether or not to switch the group display in the execution panel when the left/right keys are pressed. [On]: Display switched [Off]: Display not switched	On
Message mark size	Set the size of message mark to be displayed. You can select either [Small] or [Large]. Note that this field will not be available when [Message display] field is set to [Off].	Large
Time/div font	Set the character size of Time/div display. You can select either [Font 6] or [Font 8]. Note that this field will not be available when Time/div display is set to [Off].	Font 6(DX1000) Font 8(DX2000)
Time font	Set the character size of GRID time display. You can select either [Font 5] or [Font 6]. Note that this field will not be available when time display is set to [Off].	Font 5
Time interval	Sets the interval for displaying the time. It cannot be set when [Time display] is [Off]. [EveryGrid]: Displays in all time grids [Alternate]: Displays in every other time grid	Alternate
2nd span	Sets [On] or [Off] to indicate whether the 2nd span is Valid or Invalid. ▶See section 2.2	Off
2nd span Lower	Enter a value between 0% for the lower limit and 90% for the upper limit, with the difference between the 2 spans being 10% or greater. ▶See section 2.2	0
2nd span Upper	Enter a value between 10% for the lower limit and 100% for the upper limit, with the difference between the 2 spans being 10% or greater. ▶See section 2.2	100
Message display	You can choose to show or hide the message mark by setting [On] or [Off].	On
Time/div display	You can choose to hide or show the Time/div display by setting [On] or [Off].	On
Time display	Sets [On] or [Off] to indicate whether or not the grid time is displayed.	On
Scale grid display	Sets [On] or [Off] to indicate whether or not the scale grid is displayed. When [Time grid display] is [Off], the scale grid is automatically set to [Off], and cannot be set.	On

Continued on next page

Attribute	Description	Default value
Time grid display	Sets [On] or [Off] to indicate whether or not the time is displayed. When set to [Off], the [Time display] and [Time font] items cannot be set.	On
Depend ID	Set the ID number of the component on which this component is dependent. ▶See Section 2.2.	None
Visible	You can choose to show or hide this component by setting [On] or [Off]. ▶See Section 2.2.	On
Sync act	▶See Section 2.2.	

Note

- Depending on the display method, it may take time until the trend components in created custom display screens are displayed. To reduce the time, do the following.
  - If all channel display is turned On, turn it Off.
  - If displayed data is compressed along the time axis, lower the compress ratio or reduce the number of trend components.
  - Arrange push button, communication input, and switch components so that they do not overlap with trend components. If these components overlap with trend components, cursor movement can be slowed when selecting those components in the execution screen.
- If the compress ratio of a trend component is set to 2 or higher, the trend display phenomenon below can occur. This results from the limited capacity of the internal memory, and does not indicate a malfunction. The data is written to the internal memory.
  Phenomenon: When switching to the screen containing the trend display, old waveforms are erased and waveforms are displayed only part way through the data.

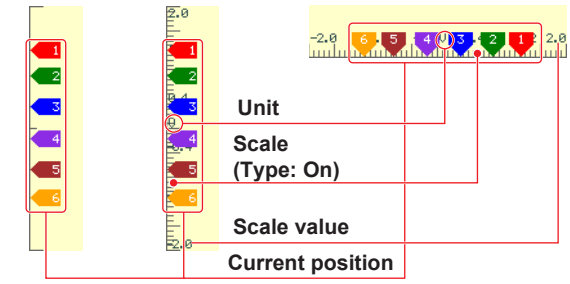
2.6 Attributes of Scale Components

These components are associated with displaying a scale. You can set vertical and horizontal direction.

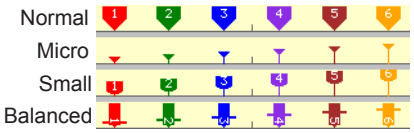
Component type (See Section 1.4.)	Scale	**Overlap restriction (See Section 1.4.)**	None: Type Off A: Type On B: Type Bitmap	**Update cycle**	Measurement interval

Component name and indicator type

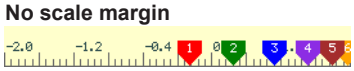
Direction: Vertical Type: Off | **Direction: Vertical Type: On** | **Direction: Horizontal Type: On**



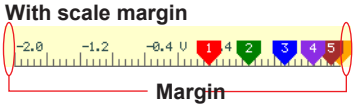
Indicator type



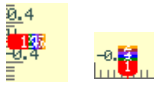
No scale margin



With scale margin

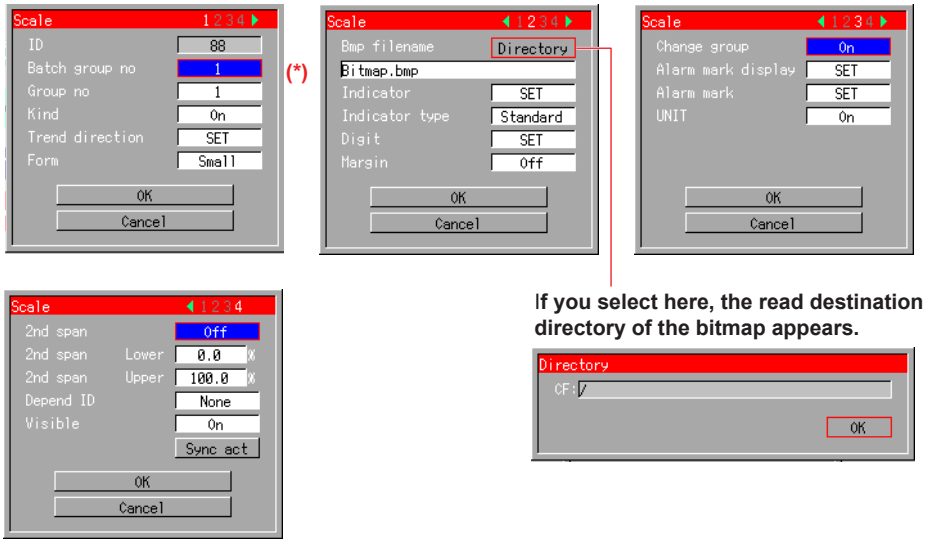


A mark appears if the scales overlap.



The current position mark will be displayed on the execution screen only.

Attribute Setting Dialog



*** Batch group no. will be displayed only when Multi batch (addtional specifications /BT2) is valid.**

List of Attributes

Attribute	Description	Default value
ID	Number automatically assigned for component identification.	88 to 91
Batch group no only with additional spec. /BT2	Set the batch group number. The batch number needs to be between [1] and number of Multi batch configured at the basic settings. The batch group number will be displayed only when Multi batch is valid.	1
Group no	Set the group number. **Multi batch Off** You can select a number from [1] to [10] for DX1000, and [1] to [36] for DX2000. **Multi batch On** You can select a number from [1] to [6] for DX1000, and [1] to [12] for DX2000.	1
Kind	Set the scale kind. [Off]: The value is not displayed. [On]: Scale values will be displayed by the number of partitions configured, at previously defined intervals. [Bitmap]: Use a bitmap image for the scale. If files specified under [Bmp filename] cannot be loaded, the scale the scale is displayed with the kind set to Off.	On
Trend direction	Set the direction of a wave. You can select [SET], [Horizon], or [Vertical].	SET
Form	Set the size of SCALE. You can select either [Small] or [Large].	Small
Bmp filename	Enter the name of a bitmap file saved on an external storage medium (CF card). The read destination is the directory used when the screen was loaded.	Bitmap.bmp
Indicator	Set how the current value is displayed. You can select [SET], [Mark], or [Bar]. Note that this field will not be available when the type is set to [Off].	SET
Indicator type	Set the indicator format to [Normal], [Micro], [Small], or [Balanced]. ▶See “Parts of the component and indicator types” on page 2-12.	Normal
Digit	Set the number of digits for the value displayed at the scale. You can select [SET], [Normal], or [Fine]. You can set this field only when the Kind is set to [On].	SET
Margin	Sets whether or not to display a margin on both sides in the direction of the span. [On]: Display a margin of 3% of component width (or height) in the direction of the scale [Off]: Margin not displayed	Off
Change group	Sets whether or not to switch the group display in the execution panel when the left/right keys are pressed. [On]: Display switched [Off]: Display not switched	On
Alarm mark display	Set how the alarm set-point mark is displayed. You can select [On], [Off], or [SET].	SET
Alarm mark	Set the type of alarm set-point mark. You can select [Alarm], [Fixed], or [SET].	SET
Unit	Selects whether or not to display the units. [On]: Units displayed [Off]: Units not displayed	On
2nd span	You can choose to validate or invalidate the 2nd span by setting [On] or [Off]. ▶See Section 2.2.	Off
2nd span Lower	Enter a value between 0.0% for the lower limit and 100.0% for the upper limit. In this case, the difference between the two spans needs to be 10.0% or greater. ▶See Section 2.2	0.0

Continued on next page

Attribute	Description	Default value
2nd span Upper	Enter a value between 0.0% for the lower limit and 100.0% for the upper limit. In this case, the difference between the two spans needs to be 10.0% or greater. ▶See Section 2.2.	100.0
Depend ID	Set the ID number of the component on which this component is dependent. ▶See Section 2.2.	None
Visible	You can choose to show or hide this component by setting [On] or [Off]. ▶See Section 2.2.	On
Sync act	▶See Section 2.2.	

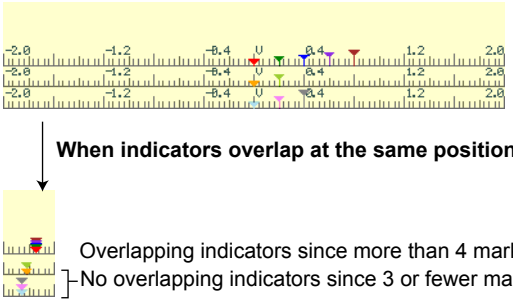
Note

- To display the indicator bar and color scale band configured when you set the type to [Bitmap], you will need to fill the background of bitmap with R:252, G:228, and B:180.
- Conditions for reading a bitmap
  (1) Do not compress down to a format of 256 colors or fewer
  (2) 640 (width) x 480 (height) pixels or fewer (the bitmap cannot be read if the value exceeds either 640 or 480.)

When scale marks overlap

- **When selecting [Micro] for the mark format**
  If the scale positions of multiple channels overlap, their marks overlap. When overlapping, marks are staggered to prevent their points from overlapping, but when the scale format is [Small] or [Large] with 4 or more, or 6 or more marks respectively, the points will overlap.

Example of a mark display when the scale type is [Small]

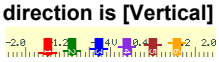

No. of CH: 5
No. of CH: 2
No. of CH: 3
When indicators overlap at the same position
Overlapping indicators since more than 4 marks at the same position
No overlapping indicators since 3 or fewer marks at the same position

- **When selecting [Small] for the mark format**
  If the scale positions of multiple channels overlap, their marks overlap. If marks overlap, they are staggered to prevent the channel numbers from overlapping, but under the following conditions, the channel numbers also overlap.
  - Waveform direction is [Vertical], scale format is [Large], and there are 4 or more marks
  - Waveform direction is [Vertical], scale format is [Small], and there are 3 or more marks
  - Waveform direction is [Horizontal] with 3 or more marks

  Note that only 2 digits of the channel number are displayed.

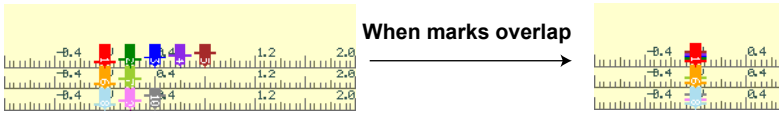
- **When selecting [Balanced] for the mark format**
  If there are channels of the same scale position, they are assigned with mark formats of left (waveform direction vertical), or up (waveform direction horizontal). In this case, if the number of channels with the same channel position is 3 or less (scale format [Small]), or 5 or less (scale format [Large]), it is assigned alternately.

Mark format assignment order (from the left) when the waveform direction is [Vertical]



Mark format assignment order (from the top) when the waveform direction is [Horizontal]

Mark display positions overlapping when the waveform direction is [Vertical] and the scale format is [Small]

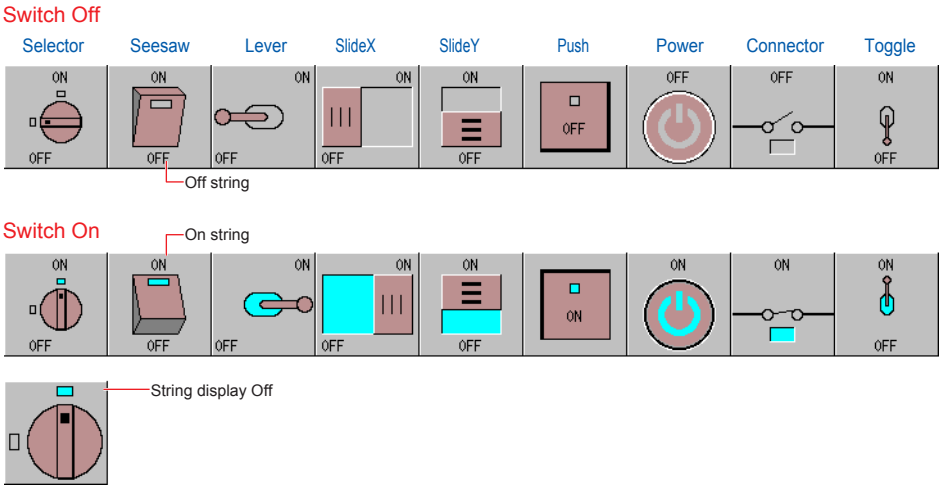


2.7 Attributes of Switch Components

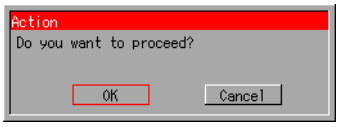
These components are associated with displaying a switch. You will be able to turn the event level switch [On]/[Off] on the execution screen.

Component type (See Section 1.4.)	Components with action functions	**Overlap restriction (See Section 1.4.)**	None	**Update cycle**	1 sec

Name of Each Component



To execute the configured action on the execution screen, select a component using the **up and down arrow keys** and press **DISP/ENTER**. If the confirmation dialog is set to [On], the following dialogs appear before executing the action.



Attribute Setting Dialog

List of Attributes

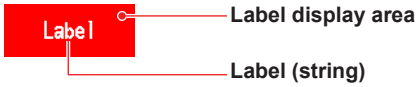
Attribute	Description	Default value
ID	Number automatically assigned for component identification.	0 to 79
Style	Set the type of switch. Selectable from among [Selector], [Seesaw], [Lever], [SlideX], [SlideY], [Push], [Power], [Connector] and [Toggle]. (See “name of each component” for more information.)	Selector
Event level switch	Set the event level switch number. You can select a number between [1] and [30].	1
Action prompt	You can choose to display a confirmation dialog when executing an action by setting [On] or [Off].	On
Font	Set the size of On/Off strings. You can select [Font 5], [Font 6], [Font 8], [Font 12], or [Font 16].	Font 6(DX1000) Font 8(DX2000)
String display	You can choose to show or hide the string display by setting [On] or [Off].	On
Gap	Set the character gap of the string. You can set a value between 0 and 15.	0
Color	Set the color of a switch. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], and [BASE].	L.brown
On color	Set the color when the switch is turned On. (Available On color is same as those listed in Color.)	Cyan
Off color	Set the color when the switch is turned Off. (Available Off color is same as those listed in Color.)	BASE
On string	Set the string when the switch is turned On. You can enter up to 8 one-byte characters.	ON
Off string	Set the string when the switch is turned Off. You can enter up to 8 one-byte characters.	OFF
Frame	Set the frame of a component. ▶See page 2-2.	Raised
Depend ID	Set the ID number of the component on which this component is dependent. ▶See Section 2.2.	None
Visible	You can choose to show or hide this component by setting [On] or [Off]. ▶See Section 2.2.	On
Sync act	▶See Section 2.2.	

2.8 Attributes of Label Components

These components are associated with displaying a label. Strings configured will be displayed.

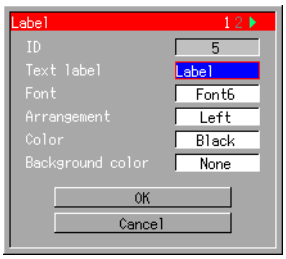
Component type (See Section 1.4.)	Label	Overlap restriction (See Section 1.4.)	None	Update cycle	None

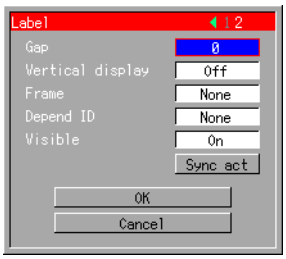
Name of Each Component



Vertical display: On

Attribute Setting Dialog





List of Attributes

Attribute	Description	Default value
ID	Number automatically assigned for component identification.	0 to 79
Text label	Set the string to be displayed. You can enter up to 64 one-byte characters.	Label
Font	Set the character size of a label (string). You can select [Font 5], [Font 6], [Font 8], [Font 12], [Font 16], or [Font 32].	Font 6(DX1000) Font 8(DX2000)
Arrangement	Set the horizontal arrangement of the string. You can select [Center], [Left], or [Right].	Left
Color	Set the color of the string. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], and [BASE].	Black
Background color	Set the fill color of the label display area. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], [BASE].and [None].	None
Gap	Sets the gap between characters in a text label. Can be set in the range from 0 to 15.	0

Continued on the next page

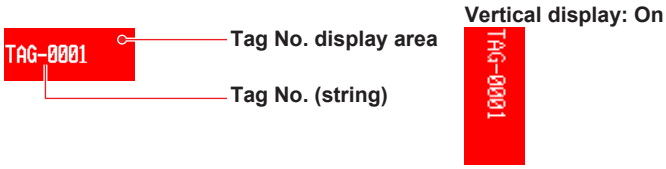
Attribute	Description	Default value
Vertical display	Sets whether or not to display the tag number vertically. [On]: Rotates the text label 90 degrees clockwise. [Off]: Displays the text label horizontally.	Off
Frame	Set the frame of a component. ▶See page 2-2.	None
Depend ID	Set the ID number of the component on which this component is dependent. ▶See Section 2.2.	None
Visible	You can choose to show or hide this component by setting [On] or [Off]. ▶See Section 2.2.	On
Sync act	▶See Section 2.2.	

2.9 Attributes of Tag No. Components

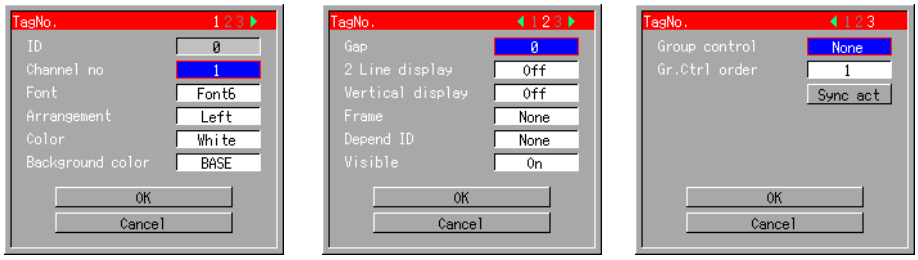
These components are associated with displaying Tag No.
(Soft key menu will be displayed when you set the Tag No. to [Yes] at the basic setting mode.)

Component type (See Section 1.4.)	Channel assignment	Overlap restriction (See Section 1.4.)	None	Update cycle	None

Name of Each Component



Attribute Setting Dialog



List of Attributes

Attribute	Description	Default value
ID	Number automatically assigned for component identification.	0 to 79
Channel no	Set the channel number to be assigned. You can configure this field when the group control is set to [None].	1
Font	Set the character size of Tag No. You can select [Font 5], [Font 6], [Font 8], [Font 12], or [Font 16].	Font 6(DX1000) Font 8(DX2000)
Arrangement	Set the horizontal arrangement of the string. You can select [Center], [Left], or [Right].	Left
Color	Set the color of the string. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], [BASE], and [Channel].	White
Background color	Set the fill color of the tag no. display area. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], [BASE], [Channel], and [None].	BASE

Continued on the next page

Attribute	Description	Default value
Gap	Set the character gap of the string. You can set a value between 0 and 15.	0
2 Line display	You can choose to display the tag no. in two lines by setting [On] or [Off].	Off
Vertical display	Sets whether or not to display the tag number vertically. [On]: Rotates the text label 90 degrees clockwise. [Off]: Displays the text label horizontally.	Off
Frame	Set the frame of a component. ▶See Section 2.2.	None
Depend ID	Set the ID number of the component on which this component is dependent. ▶See Section 2.2.	None
Visible	You can choose to show or hide this component by setting [On] or [Off]. ▶See Section 2.2.	On
Group control	Set the control status of group displayed. ▶See Section 1.11 and Section 2.2.	None
Gr.Ctrl order	Set the control order of group displayed. ▶See Section 1.11 and Section 2.2.	1
Sync act	▶See Section 2.2.	

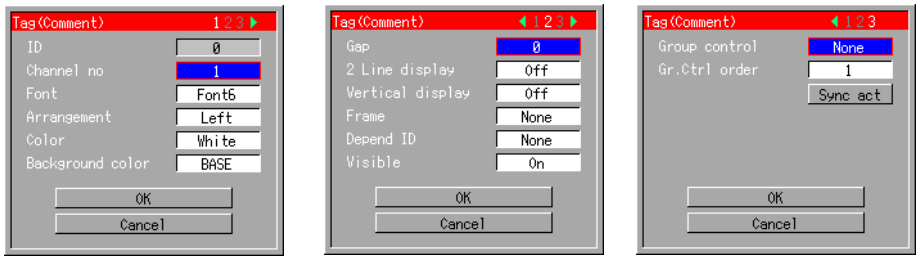
2.10 Attributes of Tag Comment Components

These components are associated with displaying tag comment (tag).

Component type (See Section 1.4.)	Channel assignment	Overlap restriction (See Section 1.4.)	None	Update cycle	None

Name of Each Component

Attribute Setting Dialog



List of Attributes

Attribute	Description	Default value
ID	Number automatically assigned for component identification	0 to 79
Channel no	Set the channel number to be assigned. You can configure this field when the group control is set to [None].	1
Font	Set the character size of the tag. You can select [Font 5], [Font 6], [Font 8], [Font 12], or [Font 16].	Font 6(DX1000) Font 8(DX2000)
Arrangement	Set the horizontal arrangement of the string. You can select [Center], [Left], or [Right].	Left
Color	Set the color of the string. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], [BASE], and [Channel].	White
Background color	Set the fill color of the tag comment display area. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], [BASE], [Channel], and [None].	BASE

Continued on the next page

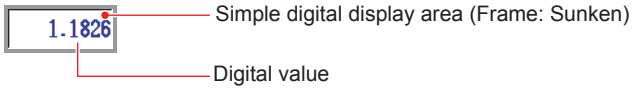
Attribute	Description	Default value
Gap	Set the character gap of the string. You can set a value between 0 and 15.	0
2 Line display	You can choose to display the tag comment in two lines by setting [On] or [Off].	Off
Vertical display	Sets whether or not to display the tag comment vertically. [On]: Rotates the text label 90 degrees clockwise. [Off]: Displays the text label horizontally.	Off
Frame	Set the frame of a component. ▶See Section 2.2.	None
Depend ID	Set the ID number of the component on which this component is dependent. ▶See Section 2.2.	None
Visible	You can choose to show or hide this component by setting [On] or [Off]. ▶See Section 2.2.	On
Group control	Set the control status of group displayed. ▶See Section 1.11 and Section 2.2.	None
Gr.Ctrl order	Set the control order of group displayed. ▶See Section 1.11 and Section 2.2.	1
Sync act	▶See Section 2.2.	

2.11 Attributes of Simple Digital Components

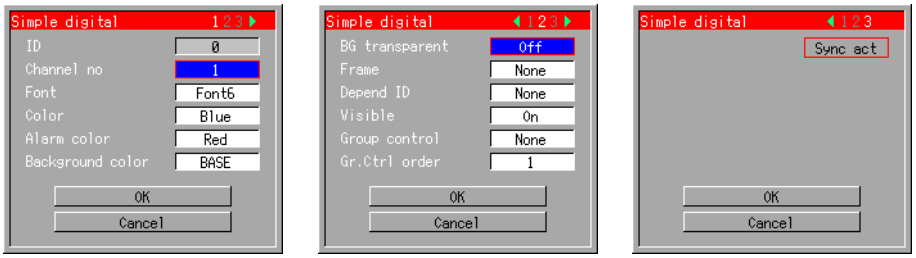
These components are associated with displaying digital values.

Component type (See Section 1.4.)	Channel assignment	**Overlap restriction (See Section 1.4.)**	None	**Update cycle**	1 sec

Name of Each Component



Attribute Setting Dialog



List of Attributes

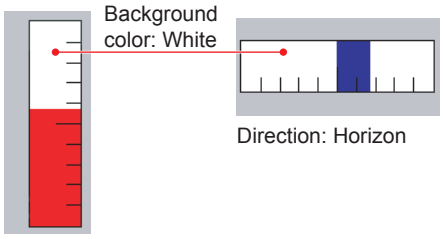
Attribute	Description	Default value
ID	Number automatically assigned for component identification	0 to 79
Channel no	Set the channel number to be assigned. You can configure this field when the group control is set to [None].	1
Font	Set the character size of digital value. You can select [Font 5], [Font 6], [Font 8], [Font 12], [Font 16], or [Font 32].	Font 6(DX1000) Font 8(DX2000)
Color	Set the color of digital value. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], [BASE], and [Channel]..	Blue
Alarm color	Set the color of digital value when the alarm is turned on. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], [BASE], [Channel], and [Alarm].	Alarm
Background color	Set the fill color of digital value area. (Background colors available are same as those listed in alarm color.)	BASE
BG transparent	You can choose to make the background color transparent by setting [On] or [Off]. BG color will become transparent when the simple digital completely overlaps the trend display components located underneath. This transparency is invalid if the simple digital protrudes from the trend display component.	Off
Frame	Set the frame of a component. ▶See page 2-2.	None
Depend ID	Set the ID number of the component on which this component is dependent. ▶See Section 2.2.	None
Visible	You can choose to show or hide this component by setting [On] or [Off]. ▶See Section 2.2.	On
Group control	Set the control status of group displayed. ▶See Section 1.11 and Section 2.2.	None
Gr.Ctrl order	Set the control order of group displayed. ▶See Section 1.11 and Section 2.2.	1
Sync act	▶See Section 2.2.	

2.12 Attributes of Simple Bar Graph Components

These components are associated with displaying a bar graph. You can display a bar graph and alarm set-point mark.

Component type (See Section 1.4.)	Channel assignment	Overlap restriction (See Section 1.4.)	None	Update cycle	1 sec

Name of Each Component



Attribute Setting Dialog

Pressing the [+] button increases the number of alarm marks.
Pressing the [–] button decreases the number of alarm marks.

List of Attributes

Attribute	Description	Default value
ID	Number automatically assigned for component identification.	0 to 79
Channel no	Set the channel number to be assigned. You can configure this field when the group control is set to [None].	1
Alarm mark	Set how many alarm set-point marks will be displayed on a simple bar graph. You can set up to four marks.	None
Base position	Set the base position of a bar graph. You can select [SET], [Normal], [Center], [Lower], or [Upper].	SET
Direction	Set the direction of a bar graph. You can select either [Vertical] or [Horizon]. The default value will depend on the aspect ratio of component size drawn.	Depend on the aspect ratio of component size Length≥ Width: Vertical Length < Width: Horizon
Color scale band	Set how the color scale band is displayed. You can select [Off] or [SET].	SET
Color	Set the color of a bar. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], [BASE], and [Channel]	Channel
Background color	Set the fill color of the bar graph area. (Background colors available are same as those listed in Color.)	BASE

Continued on next page

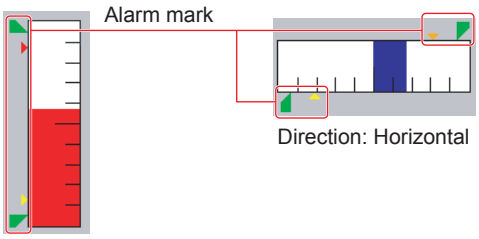
Attribute	Description	Default value
Color change (alarm on)	You can choose to change the bar color when alarm is turned on by setting [On] or [Off].	Off
Alarm color	Set the bar color when alarm is turned on. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], [BASE], [Channel], and [Alarm]. You can set this field only when the color change field is set to [On].	Alarm
Scale line	You can choose to show or hide the scale line of bar graph by setting [On] or [Off].	On
Depend ID	Set the ID number of the component on which this component is dependent. ▶See Section 2.2.	None
Visible	You can choose to show or hide this component by setting [On] or [Off]. ▶See Section 2.2.	On
Group control	Set the control status of group displayed. ▶See Section 1.11 and Section 2.2.	None
Gr.Ctrl order	Set the control order of group displayed. ▶See Section 1.11 and Section 2.2.	1
Sync act	▶See Section 2.3.	

Attributes of Alarm Set-point Mark Components

This section explains alarm set-point mark components displayed in a simple bar graph.

Component type (See Section 1.4.)	Channel assignment	Overlap restriction (See Section 1.4.)	None	Update cycle	1 sec

Name of Each Component



Attribute Setting Dialog

- The soft key menu for the number of alarm marks will be displayed only when the cursor is positioned here.
- When you press the soft key, screen shows the “alarm mark” dialog, which allows you to configure the attribute of each alarm mark.

List of Attributes

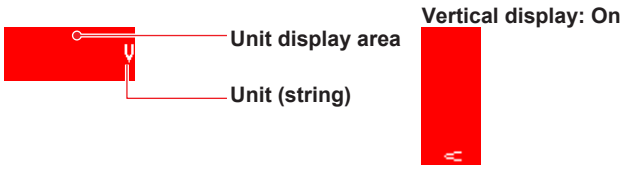
Attribute	Description	Default value
ID	Number automatically assigned for component identification	0 to 79
Alarm level	Set the alarm level. You can select a level between [1] and [4].	1
Style	Set the shape of alarm set-point mark. You can select either [Alarm] or [Fixed].	Alarm
Position	Set where to display the alarm set-point mark. For a vertical bar graph, you can select either [Left] or [Right]. For a horizontal bar graph, you can select either [Over] or [Under].	Bar graph Vertical: [Right] Horizontal: [Under]
Color change (alarm on)	You can choose to change the color of alarm mark when alarm is turned on by setting [On] or [Off].	On
Mark size	Set the size of alarm set-point mark. You can select either [Small] or [Large].	Large
Color	Sets the color of the alarm set point mark. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], and [Channel].	Lime
Alarm color	Set the color of alarm set-point mark when the alarm is on. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], [Channel], and [Alarm].	Alarm
Visible	You can choose to show or hide this component by setting [On] or [Off]. ▶See Section 2.2.	On

2.13 Attributes of Unit Components

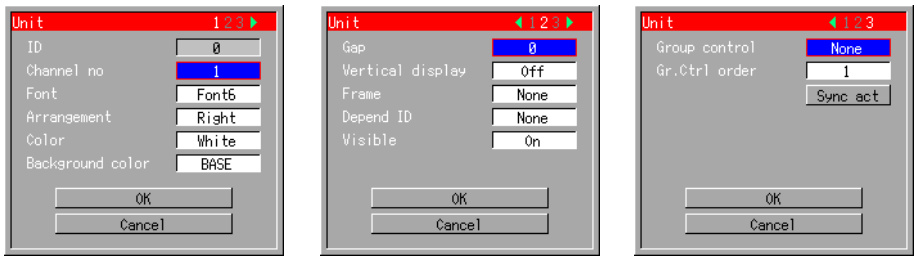
These components are associated with displaying a unit.

Component type (See Section 1.4.)	Channel assignment	Overlap restriction (See Section 1.4.)	None	Update cycle	None

Name of Each Component



Attribute Setting Dialog



List of Attributes

Attribute	Description	Default value
ID	Number automatically assigned for component identification.	0 to 79
Channel no	Set the channel number to be assigned. You can configure this field when the group control is set to [None].	1
Font	Set the character size of unit font. You can select [Font 5], [Font 6], [Font 8], [Font 12], or [Font 16].	Font 6 (DX1000) Font 8 (DX2000)
Arrangement	Set the horizontal arrangement of the string. You can select [Center], [Left], or [Right].	Right
Color	Set the color of the string. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], [BASE], and [Channel].	White
Background color	Set the fill color of the unit display area. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], [BASE], [Channel], and [None].	BASE
Gap	Set the character gap of the string. You can set a value between 0 and 15.	0
Vertical display	Sets whether or not to display the units vertically. [On]: Rotates the text label 90 degrees clockwise. [Off]: Displays the text label horizontally.	Off
Frame	Set the frame of a component. ▶See Section 2.2.	None

Continued on the next page

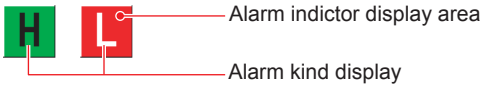
Attribute	Description	Default value
Depend ID	Set the ID number of the component on which this component is dependent.▶See Section 2.2.	None
Visible	You can choose to show or hide this component by setting [On] or [Off]. ▶See Section 2.2.	On
Group control	Set the control status of group displayed. ▶See Section 1.11 and Section 2.2.	None
Gr.Ctrl order	Set the control order of group displayed. ▶See Section 1.11 and Section 2.2.	1
Sync act	▶See Section 2.2.	

2.14 Attributes of Alarm Indicator Components

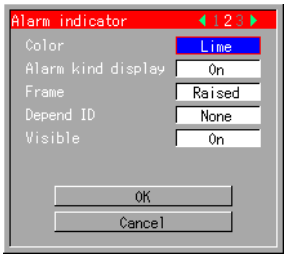
These components are associated with displaying an alarm indicator.

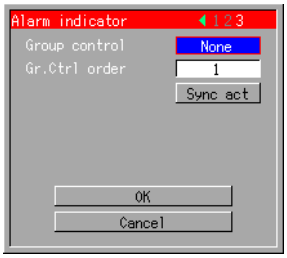
Component type (See Section 1.4.)	Channel assignment	Overlap restriction (See Section 1.4.)	None	Update cycle	1 sec

Name of Each Component

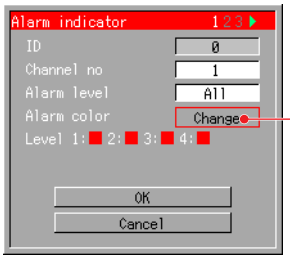


Attribute Setting Dialog

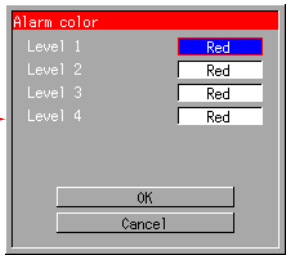




Set the alarm color for each alarm level.



- Select **[All]** at the alarm level field.
  [Change] button appears.
- Select the **[Change]** button.
  Alarm color dialog box appears.



List of Attributes

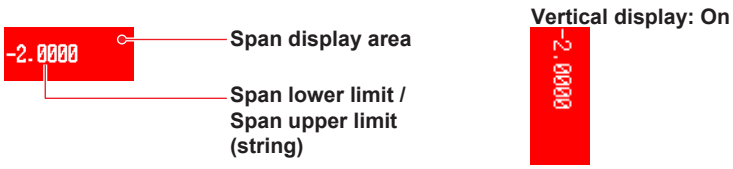
Attribute	Description	Default value
ID	Number automatically assigned for component identification.	0 to 79
Channel no	Set the channel number to be assigned. You can configure this field when the group control is set to [None].	1
Alarm level	Sets the alarm level to be assigned. Selectable from among [1], [2], [3], [4], and [All]. Selecting [All] allows an alarm color to be set for each level.	1
Alarm color	Sets the color when the alarm is on. Selectable from among [Red], [Orange], [Lime], [Yellow], [Pink], [Black], [White], and [Alarm].	Alarm
Color	Sets the color used when the alarm is off. Selectable from among [Red], [Orange], [Lime], [Yellow], [Pink], [Black], and [White].	Lime
Alarm kind display	Sets [On] or [Off] to indicate whether or not the alarm type is displayed. Setting [On] displays the alarm type (symbol) set for each alarm level.	On
Frame	Sets the component frame. ▶See Section 2.2.	Raised
Depend ID	Set the ID number of the component on which this component is dependent. ▶See Section 2.2.	None
Visible	You can choose to show or hide this component by setting [On] or [Off]. ▶See Section 2.2.	On
Group control	Set the control status of the display group. ▶See Section 1.11 and Section 2.2.	None
Gr.Ctrl order	Sets the registration order of the display group. ▶See Section 1.11 and Section 2.2.	1
Sync act	▶See Section 2.2.	

2.15 Attributes of Span Lower Limit (Span Upper Limit) Components

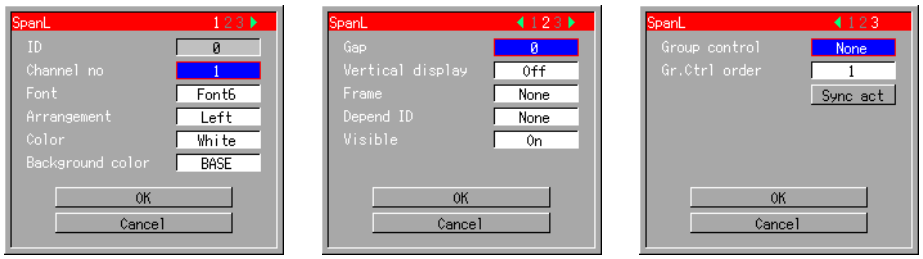
These components are used to display span lower and upper limits. (Here, the span lower limit is explained. However, this explanation can also apply to the span upper llimit if you replace “lower limit” with “upper limit.”))

Component type (See Section 1.4.)	Channel assignment	Overlap restriction (See Section 1.4.)	None	Update cycle	None

Name of Each Component



Attribute Setting Dialog



List of Attributes

Attribute	Description	Default value
ID	Number automatically assigned for component identification.	0 to 79
Channel no	Sets the channel number to be assigned. You can configure this field when the group control is set to [None].	1
Font	Sets the character size of the lower limit (upper limit) span. You can select [Font 5], [Font 6], [Font 8], [Font 12], or [Font 16].	Font 6(DX1000) Font 8(DX2000)
Arrangement	Sets the horizontal arrangement of the string in the lower limit (upper limit) span display area. Selectable from [Center], [Left], and [Right].	Left
Color	Set the color of the string. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], [BASE], and [Channel].	White
Background color	Sets the fill color of the span display area. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], [BASE], [Channel] and [None].	BASE
Gap	Sets the character gap of the string. You can set a value between 0 and 15.	0
Vertical display	Sets whether or not to display the SpanU/SpanL text label vertically. [On]: Rotates the text label 90 degrees clockwise. [Off]: Displays the text label horizontally.	Off
Frame	Sets the component frame. ▶See Section 2.2.	None

Continued on the next page

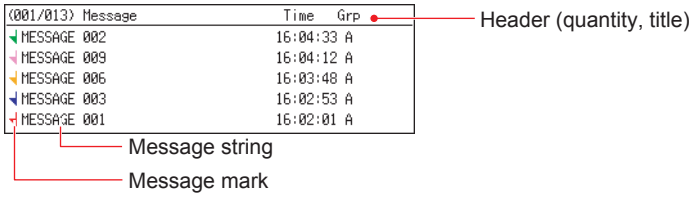
Attribute	Description	Default value
Depend ID	Set the ID number of the component on which this component is dependent. ▶See Section 2.2.	None
Visible	Sets [On] or [Off] to indicate whether or not this component is displayed. ▶See Section 2.2.	On
Group control	Set the control status of the display group. ▶See Section 1.11 and Section 2.2.	None
Gr.Ctrl order	Sets the registration order of the display group. ▶See Section 1.11 and Section 2.2.	1
Sync act	▶See Section 2.2.	

2.16 Attributes of Message List Components

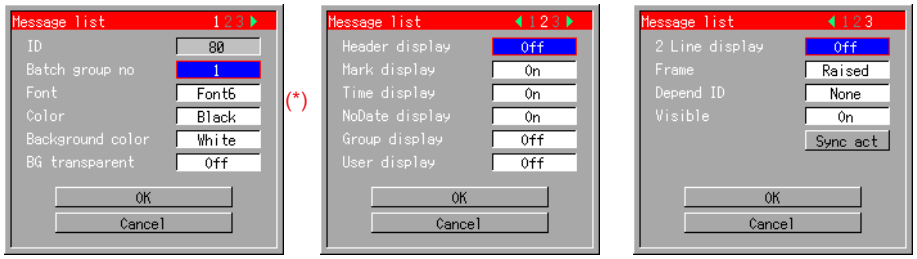
These components are used to display the message list.

Component type (See Section 1.4.)	List display	Overlap restriction (See Section 1.4.)	A	Update cycle	1 sec

Name of Each Component



Attribute Setting Dialog



* The Batch group no. will be displayed only when Multi batch (additional specification /BT2) is valid.

List of Attributes

Attribute	Description	Default value
ID	Number automatically assigned for component identification.	80 to 83
Font	Sets the character size of the message list. You can select either [Font 6] or [Font 8].	Font 6(DX1000) Font 8(DX2000)
Batch group no only with additional spec. /BT2	Sets the batch group number. Selectable from among the number of multi batches configured in the basic setting. The batch group number will be displayed only when Multi batch is valid.	1
Color	Set the color of the string. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], and [BASE].	Black
Background color	Sets the fill color of the message list area. Selectable from among [white] and [black].	White
BG transparent	You can choose to make the background color transparent by setting [On] or [Off]. The background transparency is valid when the trend display component exists under the message list that completely overlaps with it. This transparency is invalid if the message list protrudes from the trend display component.	Off
Header display	Sets [On] or [Off] to indicate whether or not the header is displayed. Setting On displays this item on the execution screen. The builder screen always hides this item.	Off
Mark display	Sets [On] or [Off] to indicate whether or not the message mark is displayed. Setting On displays this item on the execution screen. The builder screen always hides this item.	On

Continued on next page

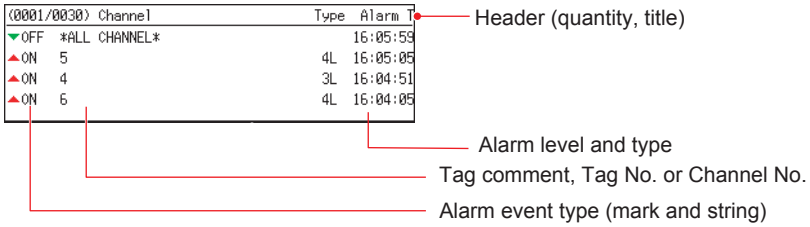
Attribute	Description	Default value
Time display	Sets [On] or [Off] to indicate whether or not the time is displayed. Setting On displays this item on the execution screen. The builder screen always hides this item.	On
NoDate display	Sets [On] or [Off] to indicate whether or not the date is displayed. Settable when the time display is On. If NoDate display is set to Off, the date appears.	On
Group display	Sets [On] or [Off] to indicate whether or not the write group is displayed.	Off
User display	Sets [On] or [Off] to indicate whether or not the write user is displayed. When On, the action function is added to enable the message and user displays to be switched on the execution screen.	Off
2 Line display	Sets [On] or [Off] to indicate whether or not the message is displayed in two lines.	Off
Frame	Sets the component frame. ▶See page 2-2.	Raised
Depend ID	Set the ID number of the component on which this component is dependent. ▶See Section 2.2.	None
Visible	Sets [On] or [Off] to indicate whether or not this component is displayed. ▶See Section 2.2.	On
Sync act	▶See Section 2.2.	

2.17 Attributes of Alarm List Components

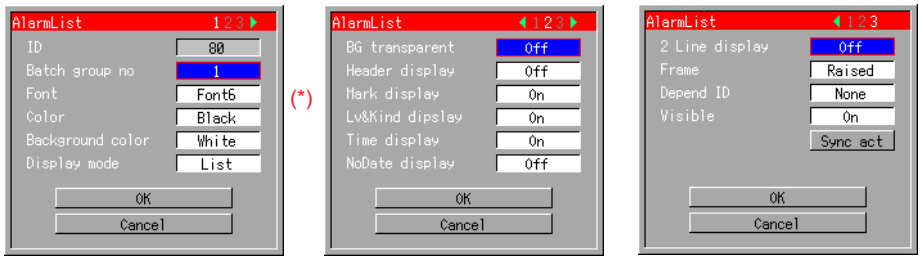
These components are used to display the alarm list.

Component type (See Section 1.4.)	List display	Overlap restriction (See Section 1.4.)	A	Update cycle	1 sec

Name of Each Component



Attribute Setting Dialog



* The Batch group no. will be displayed only when Multi batch (additional specification /BT2) is valid.

List of Attributes

Attribute	Description	Default value
ID	Number automatically assigned for component identification.	80 to 83
Font	Sets the character size of alarm list. You can select either [Font 6] or [Font 8].	Font 6(DX1000) Font 8(DX2000)
Batch group no only with additional spec. /BT2	Sets the batch group number. You can select a number from [1] to [6] for DX1000, [1] to [12] for DX2000. The batch group number will be displayed only when Multi batch is valid.	1
Color	Set the color of the string. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], and [BASE].	Black
Background color	Sets the fill color of the alarm list area. Selectable from among [white] and [black].	White
Display mode	Sets the display mode. Selectable from [List] or [Watch]. [List] Displays all alarms. [Watch] Displays the alarms being generated. Displays the alarms being generated, from among alarm data (up to 250 data items) retained for internal memory display. If alarms occur frequently, they are not displayed even if they are being generated since they are discarded starting with older data.	List

Continued on next page

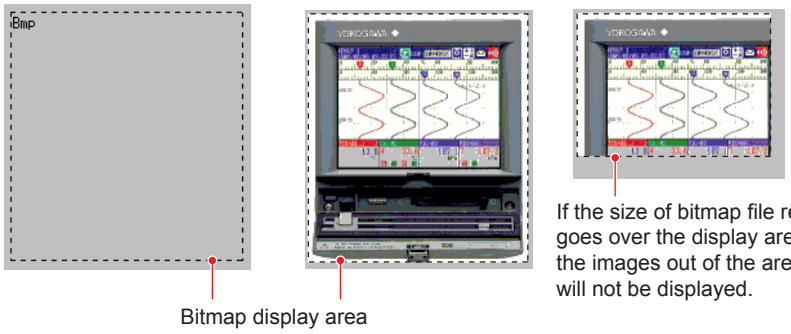
Attribute	Description	Default value
BG transparent	Sets [On] or [Off] to indicate whether or not the background color is made transparent. The background transparency is valid when the trend display component exists under the alarm list that completely overlaps with it. This transparency is invalid if the alarm list protrudes from the trend display component.	Off
Header display	Sets [On] or [Off] to indicate whether or not the header is displayed. Setting On displays this item on the execution screen. The builder screen always hides this item.	Off
Mark display	Sets [On] or [Off] to indicate whether or not the alarm event type is displayed. Setting On displays this item on the execution screen. The builder screen always hides this item.	On
Lv&Kind display	Sets [On] or [Off] to indicate whether or not the alarm level and type are displayed.	On
Time display	Sets [On] or [Off] to indicate whether or not the time is displayed. Setting On displays this item on the execution screen. The builder screen always hides this item.	On
NoDate display	Sets [On] or [Off] to indicate whether or not the date is displayed. Settable when Time display is On. If NoDate display is set to Off, the date appears.	Off
2 Line display	You can choose to display the tag no. in two lines by setting [On] or [Off].	Off
Frame	Set the frame of a component. ▶See Section 2.2.	Raised
Depend ID	Set the ID number of the component on which this component is dependent. ▶See Section 2.2.	None
Visible	Sets [On] or [Off] to indicate whether or not this component is displayed. ▶See Section 2.2.	On
Sync act	▶See Section 2.2.	

2.18 Attributes of Bitmap Components

These components are used to display a bitmap. The bitmap corresponds to the format having 256 or fewer colors. Bitmap components can be used as screen backgrounds, trend grids, and scales of trend components.

Component type (See Section 1.4.)	Still image display	Overlap restriction (See Section 1.4.)	B	Update cycle	None

Name of Each Component


Bmp
If the size of bitmap file read goes over the display area, the images out of the area will not be displayed.
Bitmap display area

Note

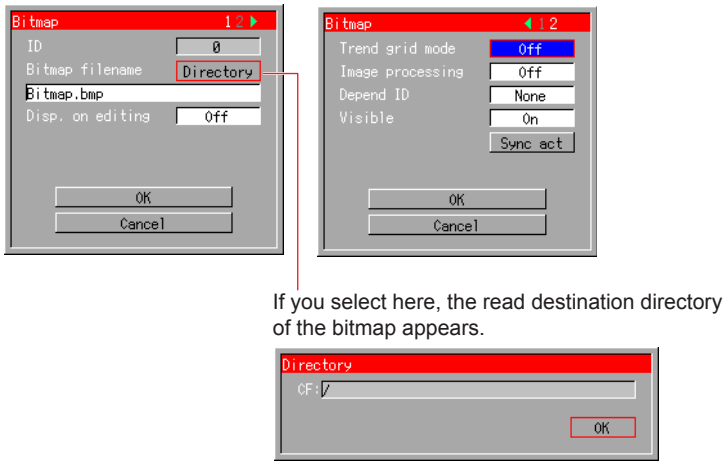
Conditions for reading a bitmap

(1) Uncompressed format with 256 colors or fewer

(2) 640 (width) x 480 (height) pixels or less (the bitmap cannot be read if the value exceeds either 640 or 480.)

- Make sure that the bitmap image information meets the conditions.
- When using a paint program to create a bitmap, save it as a monochrome, 16-color, or 256-color bitmap.

Attribute Setting Dialog



List of Attributes

Attribute	Description	Default value
ID	Number automatically assigned for component identification.	132 to 133
Bmp filename	Enter the name of a bitmap file saved on an external storage medium (CF card). The read destination is the directory used when the screen was loaded.	Bitmap.bmp

Continued on the next page

Attribute	Description	Default value
Disp. on editing	Sets [On] or [Off] to indicate whether or not the bitmap is displayed on the builder screen.	Off
Trend grid mode	Sets [On] or [Off] to indicate whether or not it should act as the grid of the trend component. If this item is turned On, when a trend component ID is specified for a Depend ID, the [Disp. on editing] item is On, its background turns gray, and it cannot be selected. Also, the [Image processing] item turns Off, its background turns gray, and it cannot be selected. If this item is turned Off, when a trend component ID is specified for a Depend ID, the backgrounds of the [Disp. on editing] and [Image processing] items turn white, and they can be selected.	Off
Image processing	Sets [On] or [Off] to indicate whether or not the image processing is converted when the bitmap file is read. If On, the bitmap file is optimized to the display of this equipment. However, it takes time until the bitmap appears. About 30 seconds is required when the image size is 640 x 480 pixels	Off
Depend ID	Set the ID number of the component on which this component is dependent. ▶See Section 2.2.	None
Visible	Sets [On] or [Off] to indicate whether or not this component is displayed. ▶See Section 2.2.	On
Sync act	▶See Section 2.2.	

Note

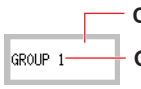
- If [Image processing] is set to On, it may take time to display created custom display screens. To save time, turn it Off.
- Bitmap files are placed in the same directory as custom display screen setting files (.DCD). If they are in the wrong directory, the bitmaps will not be able to be displayed.
- If a custom display screen using a bitmap component is created in internal memory, display the bitmap in the execution panel after the screen is created. To display bitmaps later on that have never been displayed previously, the external storage media (CF card) containing them must be inserted into the instrument.
- When completely overlapping bitmap components of the same size and switching between them on the DX, the external storage media (CF card) holding those bitmap files must be inserted into the instrument.
- It is possible to display bitmap files used in custom display screens saved to internal memory even if the bitmap files are saved to an external storage medium that is not inserted, but the following conditions must be met.
  Internal memory capacity of 400 MB or more (check the MEMORY item in the system information screen).
- When loading screens or moving from the builder screen to the execution panel, the bitmap files in the external storage media (CF card) are copied to the internal memory. Be sure to save all bitmap files being used in the screen to the external storage media (CF card). When displaying custom display screens saved to internal memory, an error message appears if specified bitmap files are not found.
- Even if bitmap files are specified in the attributes, an error message does NOT appear if the bitmap files are not present during a copy operation. Check the attributes for the presence/absence of bitmap files.

2.19 Attributes of Group Name Components

This component displays the group name corresponding to the specified group number. If you want to display components in a custom display of not only the same group but of several groups, or if you set the status area to No display and thereby eliminate the group name, you can create this group name component to display group names.

Component type (See Section 1.4.)	Status display component	Overlap restriction (See Section 1.4.)	None	Update cycle	None

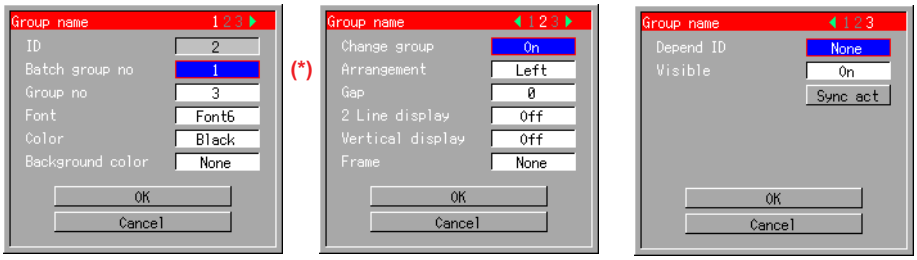
Name of Each Component



If you set Change group to On in the property settings, the group name changes when you press the **left/right arrow keys** on the execution panel.

Vertical display

Attribute settings dialog box



* The Batch group no. will be displayed only when Multi batch (additional specification /BT2) is valid.

List of Attributes

Attribute	Description	Default value
ID	Number automatically assigned for component identification.	0 to 79
Batch group no only with additional spec. /BT2	Sets the batch group number. You can select a number from [1] to [6] for DX1000, [1] to [12] for DX2000. The batch group number will be displayed only when Multi batch is valid.	1
Group no	Set the group number. **Multi batch Off** You can select a number from [1] to [10] for DX1000, [1] to [36] for DX2000. **Multi batch On** You can select a number from [1] to [6] for DX1000, [1] to [12] for DX2000.	1
Font	Set the size of On/Off strings. You can select [Font 5], [Font 6], [Font 8], [Font 12], or [Font 16].	Font 6(DX1000) Font 8(DX2000)
Color	Set the color of a group name from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], and [BASE]. [Background color]: The base color set for the screen.	Black

Continued on the next page

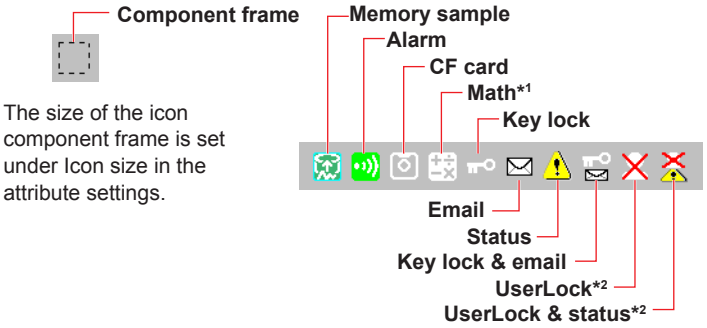
Attribute	Description	Default value
Background color	Set the color of the group name. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], and [BASE]. [Background color]: The base color set for the screen..	None
Change group	Sets whether or not to switch the group display in the execution panel when the left/right keys are pressed.	On
Arrangement	Set the horizontal arrangement of the string. You can select [Center], [Left], or [Right].	Left
Gap	Sets the character gap of the string. You can set a value between 0 and 15.	0
2 Line display	Sets [On] or [Off] to indicate whether or not to group name in 2 lines with word-wrapping.	Off
Vertical display	Sets whether or not to display the group name display vertically. [On]: Rotates the text label 90 degrees clockwise. [Off]: Displays the text label horizontally.	Off
Frame	Set the component frame. ▶See section 2.2	None
Depend ID	Set the ID number of the component on which this component is dependent. ▶See section 2.2	None
Visible	You can choose to show or hide this component by setting [On] or [Off]. ▶See section 2.2	On
Sync act	▶See section 2.2	

2.20 System Icon Component Attributes

You can create a system icon for display in the status area. You can create icons that display only the items you wish in the screen, and these can be used when not displaying the status area.

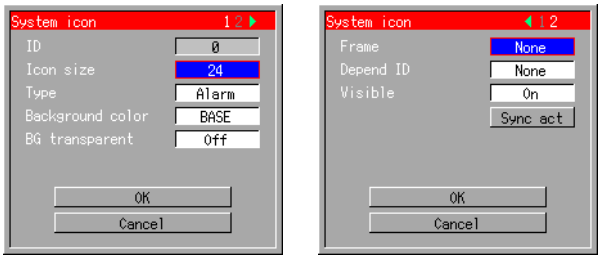
Component type (See Section 1.4.)	Status display component	Overlap restriction (See Section 1.4.)	None	Update cycle	1 sec

Parts of the component and kinds of icons



*1 Can only be selected with the Math option
*2 Can only be selected with the /AS1 option

Attribute settings dialog box



List of Attributes

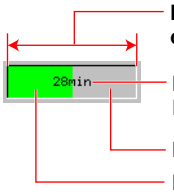
Attribute	Description	Default value
ID	This number is automatically assigned to identify the components.	0 to 79
Size	Select a system icon size of [24] or [32].	24 (DX1000) 32 (DX2000)
Type	Select a system icon kind of [Memory sample], [Alarm], [CF card], [Math], [Key lock], [Email], [Status], [Key & email]*, [UserLock], or [User & status]*. * [Key & email] is the icon for [Key lock & email]. [User & status] is the icon for [UserLock & status].	Alarm
Background color	Set a background color to use within the component frame. You can select a color of: [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Light blue], [Violet], [Gray], [Lime], [Cyan], [Dark blue], [Yellow], [Light gray], [Purple], [Pink], [L.brown], [L.green], [Dark gray], [Olive], [Dark cyan], [S.green], [Black], [White], or [Background color].	Background color
BG transparent	Turns the background transparency [On]/[Off]. The background transparency is valid when a trend display component exists under the system icon that completely overlaps with it. The transparency is invalid if the system icon component protrudes from the trend display component.	Off
Frame	Set the component frame. ▶See section 2.2	None
Depend ID	Set the ID number of the component on which this component is dependent. ▶See section 2.2	None
Visible	You can choose to show or hide this component by setting [On] or [Off]. ▶See section 2.2	On
Sync act	▶See section 2.2	

2.21 Attributes of Memory Bar Components

This component appears in the status area and shows the progress of memory sampling. The width of the Memory bar component frame represents the file save interval (display data) or data length (event data), and shows the remaining time for memory sampling.

Component type (See Section 1.4.)	Status display component	Overlap restriction (See Section 1.4.)	None	Update cycle	1 sec

Parts of the component



File save interval (for display data), or data length (for event data)

Remaining memory sample time
For event data, the status is displayed as a text label.

Background

Bar

Attribute settings dialog box

*** The Batch group no. will be displayed only when Multi batch (additional specification /BT2) is valid.**

List of Attributes

Attribute	Description	Default value
ID	This number is automatically assigned to identify the components.	0 to 79
Batch group no only with additional spec. /BT2	Sets the batch group number. You can select a number from [1] to [6] for DX1000, [1] to [12] for DX2000. The batch group number will be displayed only when Multi batch is valid.	1
Data type	Select a data type of [Display] or [Event] to display in the Memory bar. Note that this can only be selected when the basic setting mode memory data type is set to Event + display. If the data type is set to Display or Event, it cannot be selected, and reverts to the data type setting.	Display (or Event when the memory type of Basic setting mode is Event)
Direction	Sets the direction of bar graphs. You can set [Vertical] or [Horizontal]. The default value differs depending on the vertical-to-horizontal size ratio of the plotted component. A [Vertical] bar expands vertically from bottom to top. A [Horizontal] bar expands horizontally from left to right.	Depends on the vertical-to-horizontal ratio Vert≥Horiz: Vert Vert<Horiz: Horiz
Rem. time display	Sets [On] or [Off] to indicate whether or not to display the remaining sampling time in the Rem. time display Memory bar.	Off

Continued on the next page

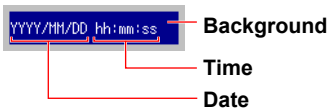
Attribute	Description	Default value
Color	Set the color of a bar. You can select a color of: [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Light blue], [Violet], [Gray], [Lime], [Cyan], [Dark blue], [Yellow], [Light gray], [Purple], [Pink], [L.brown], [L.green], [Dark gray], [Olive], [Dark cyan], [S.green], [Black], [White], or [Background color]. [Background color]: The base color set for the screen.	Lime
Background color	Sets a background color. (Background colors available are same as those listed in Color.)	Background color
Color(pre-Trig)	Select the color of the bar during a trigger wait. (The choices for Color(pre-Trig) are the same as those for Color.) It cannot be selected in the following cases. • When the data type is Display data • When the data type is Event data, and the event data mode is Free	Orange
Font	Set the font for the text label that shows the remaining time or event data status. Select from [Font5], [Font6], [Font8], [Font12], or [Font16]. It cannot be selected in the following cases. • When the Rem. time display is Off and the data type is Display data • When the Rem. time display is Off, the data type is Event data, and the mode is Free	Font 5
String color	Set the display color for the text label that shows the remaining time or the event data status. (The choices of string color are the same as those for Color.) Selection is unavailable under the same conditions as for the Font item.	Black
Frame	Set the component frame. ▶See section 2.2	None
Depend ID	Set the ID number of the component on which this component is dependent. ▶See section 2.2	None
Visible	You can choose to show or hide this component by setting [On] or [Off]. ▶See section 2.2	On
Sync act	▶See section 2.2	

2.22 Attributes of Time Label Components

This component displays the current date and time.
You can create this date and time component if setting the status area to No display eliminates the date and time.

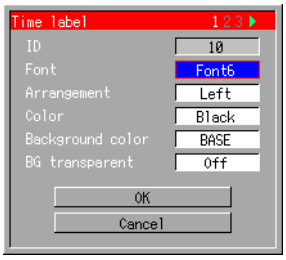
Component type (See Section 1.4.)	Status display component	Overlap restriction (See Section 1.4.)	None	Update cycle	1 sec

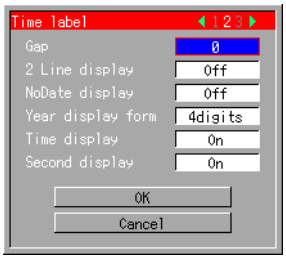
Parts of the component

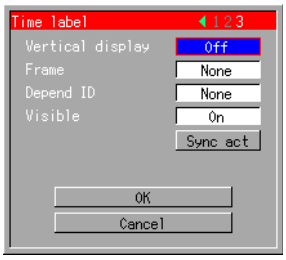


Vertical display

Attribute settings dialog box







List of Attributes

Attribute	Description	Default value
ID	This number is automatically assigned to identify the components.	0 to 79
Font	Set the character size of current date and time. You can select [Font 5], [Font 6], [Font 8], [Font 12], or [Font 16].	Font 6(DX1000) Font 8(DX2000)
Arrangement	Set the horizontal arrangement of the string. You can select [Center], [Left], or [Right].	Left
Color	Set the color of the current date and time. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], and [BASE]. [Background color]: The base color set for the screen.	Black
Background color	Sets a background color. (The choices for the background color are the same as those for Color, plus [None].)	BASE
BG transparent	Turns the background transparency [On]/[Off]. When On, frames in the builder screen are shown with dotted lines indicating the transparent background. The background transparency is valid when a trend display component exists under the date time label component that completely overlaps with it. The transparency is invalid if the time label component protrudes from the trend display component.	Off
Gap	Set the character gap of the string. You can set a value between 0 and 15.	0

Continued on the next page

Attribute	Description	Default value
2 line display	Sets [On] or [Off] to indicate whether or not to display time and date text labels in 2 lines with word-wrapping. This cannot be set if NoDate display is [On] or Time display is [Off].	Off
NoDate display	Sets whether or not to display the date. [On] Date not displayed. [Off] Date displayed.	Off
Year display form	Selects the year display format. [None]: The year is not displayed. [4digits]: The year is displayed in the format yyyy. [2digits]: The year is displayed in the format yy.	[4digits]
Time display	Sets [On] or [Off] to indicate whether or not the time is displayed. This cannot be set if No Date time display is [On].	On
Second display	Sets [On] or [Off] to indicate whether or not the seconds are displayed. The second display cannot be selected if Time display is set to Off.	On
Vertical display	Sets whether or not to display the Time display vertically. [On]: Rotates the text label 90 degrees clockwise. [Off]: Displays the text label horizontally.	Off
Frame	Set the component frame. ▶See section 2.2	None
Depend ID	Set the ID number of the component on which this component is dependent. ▶See section 2.2	None
Visible	You can choose to show or hide this component by setting [On] or [Off]. ▶See section 2.2	On
Sync act	▶See section 2.2	

2.23 Attributes of Batch Group Number Components

This component displays the batch group number for MultiBatch.
You can create this group name component if setting the status area to No display eliminates the batch group number. When MultiBatch is Off, batch group number components cannot be created and their attributes cannot be edited.

Component type (See Section 1.4.)	Status display component	Overlap restriction (See Section 1.4.)	None	Update cycle	None

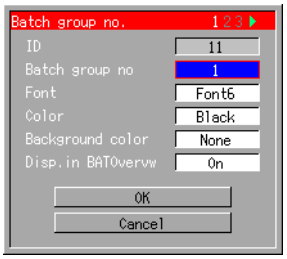
Parts of the component

Background

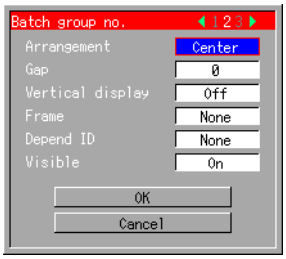
Batch group number

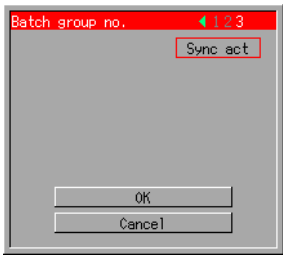
Vertical display

Attribute settings dialog box



(*)





*** The Batch group no. will be displayed only when Multi batch (additional specification /BT2) is valid.**

List of Attributes

Attribute	Description	Default value
ID	This number is automatically assigned to identify the components.	0 to 79
Batch group no only with additional spec. /BT2	Sets the batch group number. You can select a number from [1] to [6] for DX1000, [1] to [12] for DX2000. The batch group number will be displayed only when Multi batch is valid.	1
Font	Sets the font of the text label showing the batch group number. Select from [Font5], [Font6], [Font8], [Font12], or [Font16].	Font 6(DX1000) Font 8(DX2000)
Color	Sets the color of the string showing the batch group number. You can select a color of: [Red], [Green, [Blue], [B.violet], [Brown], [Orange], [Y.green], [Light blue], [Violet], [Gray], [Lime], [Cyan], [Dark blue], [Yellow], [Light gray], [Purple], [Pink], [L.brown], [L.green], [Dark gray], [Olive], [Dark cyan], [S.green], [Black], [White], or [Background color]. [Background color]: The base color set for the screen.	Black
Background color	Sets a background color. (The choices for the background color are the same as those for Color, plus [None].)	None
Disp.in BTOverview	When the displayed screen is in BTOverview mode, sets [On] or [Off] to indicate whether or not to display the batch group number.	On
Text label arrangement	Sets the horizontal arrangement of the text label. You can select [Center], [Left], or [Right].	Center
Gap	Sets the gap between characters in a text label. Can be set in the range from 0 to 15.	0

Continued on the next page

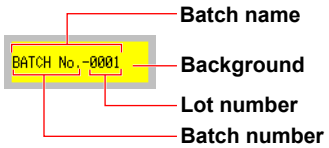
Attribute	Description	Default value
Vertical display	Sets whether or not to display the batch group number vertically. [On]: Rotates the text label 90 degrees clockwise. [Off]: Displays the text label horizontally.	Off
Frame	Set the component frame. ▶See section 2.2	None
Depend ID	Set the ID number of the component on which this component is dependent. ▶See section 2.2	None
Visible	You can choose to show or hide this component by setting [On] or [Off]. ▶See section 2.2	On
Sync act	▶See section 2.2	

2.24 Attributes of Batch Name Components

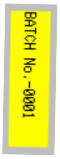
This component displays the batch name.
You can create this batch name component if setting the status area to No display eliminates the batch name.
The component displays the batch name, batch number, and lot number separated by hyphens. The batch and lot numbers shown in the component are the ones in the dialog box that appear when you press the **FUNC key** followed by the **Batch soft key**.
When Batch is Off, batch name components cannot be created and their attributes cannot be edited.

Component type (See Section 1.4.)	Status display component	**Overlap restriction (See Section 1.4.)**	None	**Update cycle**	None

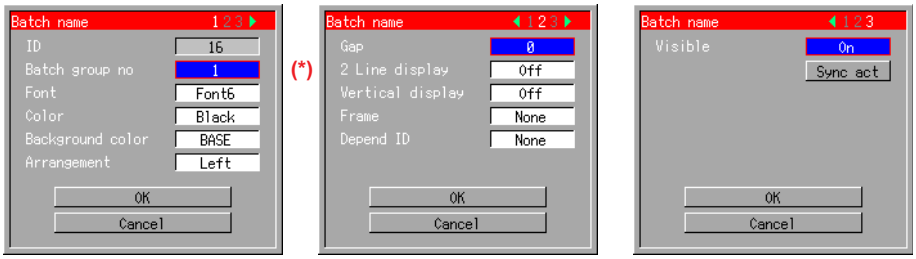
Parts of the component



Vertical display



Attribute settings dialog box



*** The Batch group no. will be displayed only when Multi batch (additional specification /BT2)**

List of Attributes

Attribute	Description	Default value
ID	This number is automatically assigned to identify the components.	0 to 79
Batch group no only with additional spec. /BT2	Sets the batch group number. You can select a number from [1] to [6] for DX1000, [1] to [12] for DX2000. The batch group number will be displayed only when Multi batch is valid.	1
Font	Sets the font of the text label showing the batch name. Select from [Font5], [Font6], [Font8], [Font12], or [Font16].	Font 6(DX1000) Font 8(DX2000)
Color	Sets the color of the string showing the batch name. You can select a color of: [Red], [Green, [Blue], [B.violet], [Brown], [Orange], [Y.green], [Light blue], [Violet], [Gray], [Lime], [Cyan], [Dark blue], [Yellow], [Light gray], [Purple], [Pink], [L.brown], [L.green], [Dark gray], [Olive], [Dark cyan], [S.green], [Black], [White], or [Background color]. [Background color]: The base color set for the screen.	Black
Background color	Sets a background color. (The choices for the background color are the same as those for Color, plus [None].)	Background color
Arrangement	Sets the horizontal arrangement of the text label. You can select [Center], [Left], or [Right].	Left

Continued on the next page

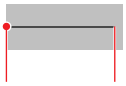
Attribute	Description	Default value
Gap	Sets the gap between characters in a text label. Can be set in the range from 0 to 15.	0
2 line display	Sets [On] or [Off] to indicate whether or not to batch number and lot number in 2 lines with word-wrapping.	Off
Vertical display	Sets whether or not to display the Time display vertically. [On]: Rotates the text label 90 degrees clockwise. [Off]: Displays the text label horizontally.	Off
Frame	Set the component frame. ▶See section 2.2	None
Depend ID	Set the ID number of the component on which this component is dependent. ▶See section 2.2	None
Visible	You can choose to show or hide this component by setting [On] or [Off]. ▶See section 2.2	On
Sync act	▶See section 2.2	

2.25 Attributes of Line Components

These components are used to display a line. A line connecting any two points is displayed.

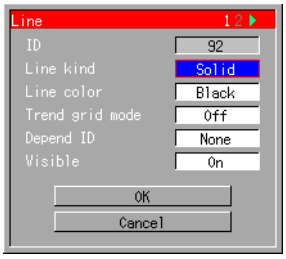
Component type (See Section 1.4.)	Shape	Overlap restriction (See Section 1.4.)	None	Update cycle	None

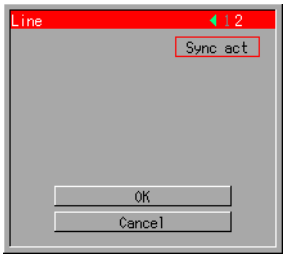
Name of Each Component



Origin You can draw a line going in the left/right or up/down direction from an origin.

Attribute Setting Dialog





List of Attributes

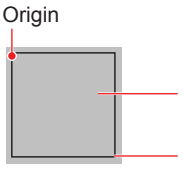
Attribute	Description	Default value
ID	Number automatically assigned for component identification.	92 to 131
Line kind	Sets line type. Selectable from among [Solid], [Dotted], [Dashed], and [Longdash].	Solid
Line color	Sets the color of a line. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], and [BASE].	Black
Trend grid	Sets [On] or [Off] to indicate whether or not it should act as the grid of the trend component dependent on the trend grid. [On]: Plotted as the grid for the trend component of the Depend ID. Even when placed in front of the trend component, the portions that do not overlap with the trend component are not displayed. [Off]: Displayed as lines.	Off
Depend ID	Set the ID number of the component on which this component is dependent. ▶See Section 2.2.	None
Visible	Sets [On] or [Off] to indicate whether or not this component is displayed. This cannot be set if a dependent component is set. ▶See Section 2.2.	On
Sync act	▶See Section 2.2.	

2.26 Attributes of Rectangle Components

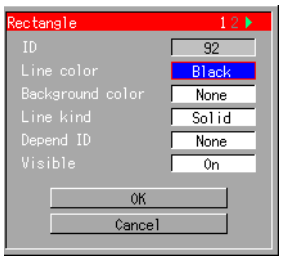
These components are used to display a rectangle.

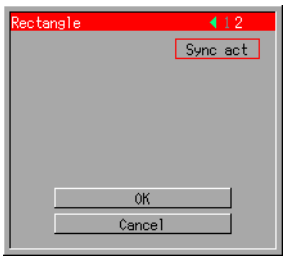
Component type (See Section 1.4.)	Shape	Overlap restriction (See Section 1.4.)	None	Update cycle	None

Name of Each Component



Attribute Setting Dialog





List of Attributes

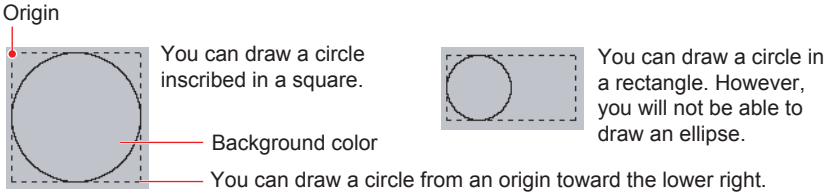
Attribute	Description	Default value
ID	Number automatically assigned for component identification.	92 to 131
Line color	Sets the color of a line. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], [BASE], and [None].	Black
Background color	Sets the background color. (Background colors available are same as those listed in Line color.)	None
Line kind	Sets line type. Selectable from among [Solid], [Dotted], [Dashed], and [Longdash].	Solid
Depend ID	Sets the ID number of the component on which this component is dependent. ▶See Section 2.2.	None
Visible	Sets [On] or [Off] to indicate whether or not this component is displayed. ▶See Section 2.2.	On
Sync act	▶See Section 2.2.	

2.27 Attributes of Circle Components

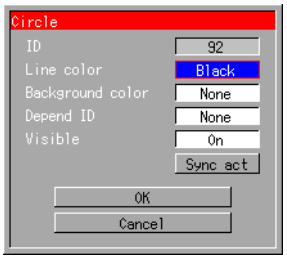
These components are used to display a circle..

Component type (See Section 1.4.)	Shape	Overlap restriction (See Section 1.4.)	None	Update cycle	None

Name of Each Component


Origin
You can draw a circle inscribed in a square.
Background color
You can draw a circle from an origin toward the lower right.
You can draw a circle in a rectangle. However, you will not be able to draw an ellipse.

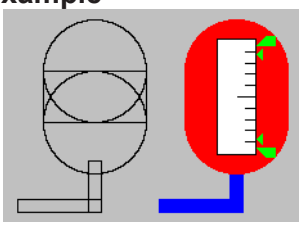
Attribute Setting Dialog



List of Attributes

Attribute	Description	Default value
ID	Number automatically assigned for component identification	92 to 131
Line color	Sets the color of a line. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], [BASE], and [None]	Black
Background color	Sets the background color. (Background colors available are the same as those listed in Line color.)	None
Depend ID	Sets the ID number of the component on which this component is dependent. ▶See Section 2.2.	None
Visible	Sets [On] or [Off] to indicate whether or not this component is displayed. ▶See Section 2.2.	On
Sync act	▶See Section 2.2.	

Plotting example



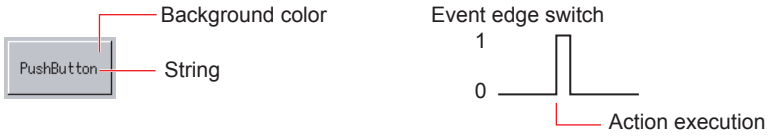
When you set the background color without a line color after you have drawn a circle or rectangle, the drawings appear to be connected.
Combining the settings of line color and background color allows you to draw a more complex image.

2.28 Attributes of Push Button Components

These components are used to display a push button. Using the action function allows the event edge switch to be switched on the execution screen as shown in the figure below.

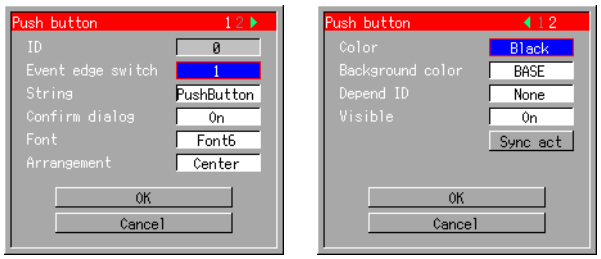
Component type (See Section 1.4.)	Components with action functions	Overlap restriction (See Section 1.4.)	None	Update cycle	None

Name of Each Component



To execute the configured action on the execution screen, select a component using the **up and down arrow keys** and press **DISP/ENTER**.

Attribute Setting Dialog



List of Attributes

Attribute	Description	Default value
ID	Number automatically assigned for component identification.	0 to 79
Event edge switch	Sets the event edge switch number. Selectable from [1] and [30].	1
String	You can enter up to 64 one-byte characters, as the string to be displayed on the button.	PushButton
Confirm dialog	Sets [On] or [Off] to indicate whether or not the confirmation dialog is displayed during action execution.	On
Font	Sets character size. Selectable from [Font 5], [Font 6], [Font 8], [Font 12], [Font 16], and [Font 32].	Font 6(DX1000) Font 8(DX2000)
Arrangement	Sets the horizontal arrangement of the string to be displayed on the button. Selectable from [Center], [Left], and [Right].	Center
Color	Set the color of the string. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], and [BASE].	Black

Continued on next page

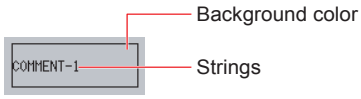
Attribute	Description	Default value
Background color	Sets the background color. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], [BASE], and [None].	BASE
Depend ID	Sets the ID number of the component on which this component is dependent. ▶See Section 2.2.	None
Visible	Sets [On] or [Off] to indicate whether or not this component is displayed. ▶See Section 2.2.	On
Sync act	▶See Section 2.2.	

2.29 Attributes of Comment Box Components

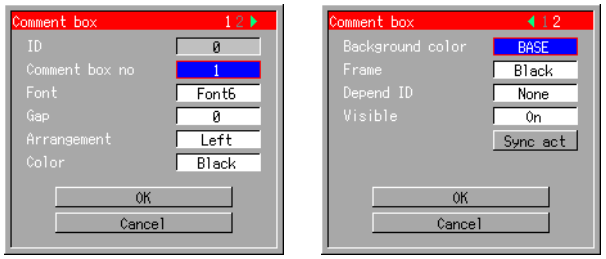
These components are used to display a comment box. You can display the string by specifying the comment box number configured for the DX main unit.

Component type (See Section 1.4.)	Comment display	Overlap restriction (See Section 1.4.)	None	Update cycle	None

Name of Each Component



Attribute Setting Dialog



List of Attributes

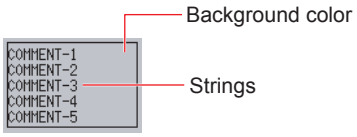
Attribute	Description	Default value
ID	Number automatically assigned for component identification.	0 to 79
Comment box no	Sets the comment box number. 1 to 100 for DX1000 and 1 to 200 for DX2000	1
Font	Sets the character size. Selectable from [Font 5], [Font 6], [Font 8], [Font 12], and [Font 16].	Font 6(DX1000) Font 8(DX2000)
Gap	Sets the character gap of the string. Settable in the range of 0 to 15.	0
Arrangement	Sets the horizontal arrangement of the string. Selectable from [Center], [Left], and [Right].	Left
Color	Sets the color of the string. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], and [BASE].	Black
Background color	Sets the background color. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], [BASE], and [None].	BASE
Frame	Sets the component frame. ▶See page 2-2.	Black
Depend ID	Sets the ID number of the component on which this component is dependent. ▶See Section 2.2.	None
Visible	Sets [On] or [Off] to indicate whether or not this component is displayed. ▶See Section 2.2.	On
Sync act	▶See Section 2.2.	

2.30 Attributes of Comment Block Components

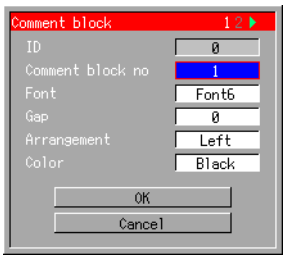
These components are used to display a comment block. You can display the string by specifying the comment block number configured for the DX main unit.

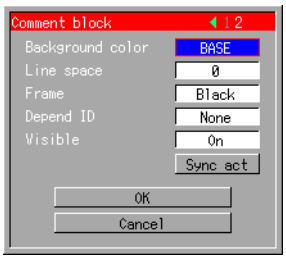
Component type (See Section 1.4.)	Comment display	Overlap restriction (See Section 1.4.)	None	Update cycle	None

Name of Each Component



Attribute Setting Dialog





List of Attributes

Attribute	Description	Default value
ID	Number automatically assigned for component identification.	0 to 79
Comment block no	Sets the comment block number. 1 to 50 for DX1000 and 1 to 100 for DX2000	1
Font	Sets the character size. Selectable from [Font 5], [Font 6], [Font 8], [Font 12], and [Font 16].	Font 6(DX1000) Font 8(DX2000)
Gap	Sets the character gap of the string. Selectable in the range of 0 to 15.	0
Arrangement	Sets the horizontal arrangement of the string. Selectable from [Center], [Left], and [Right].	Left
Color	Set the color of the string. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], and [BASE].	Black

Continued on next page

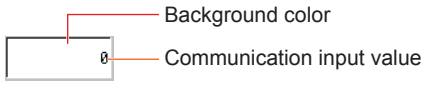
Attribute	Description	Default value
Background color	Sets the background color. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], [BASE], and [None].	BASE
Line space	Sets the line space of the string. You can set a value between 0 and 15.	0
Frame	Sets the component frame. ▶See Section 2.2.	Black
Depend ID	Sets the ID number of the component on which this component is dependent. ▶See Section 2.2.	None
Visible	Sets [On] or [Off] to indicate whether or not this component is displayed. ▶See Section 2.2.	On
Sync act	▶See Section 2.2.	

2.31 Attributes of Communication Input Components

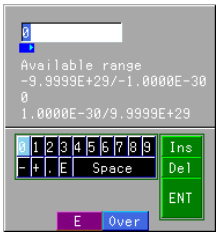
These components are used to write values to the communication channel. Using the action function enables numeric values to be written to the specified communication channel on the execution screen. The value written can be read from other devices using Modbus function. When you assign the communication channel to the computation channel, you will also be able to write an arbitrary value to other devices using Modbus function.

Component type (See Section 1.4.)	Components with action functions	**Overlap restriction (See Section 1.4.)**	None	**Update cycle**	1 sec

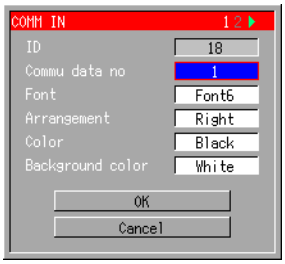
Name of Each Component

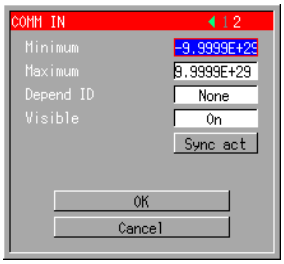


The character/value input window shown on the right will appear when you press **DISP/ ENTER** after selecting the communication input components using the **up and down arrow keys** on the execution screen.



Attribute Setting Dialog





List of Attributes

Attribute	Description	Default value
ID	Number automatically assigned for component identification.	0 to 79
Commu data no	Sets the communication input data number for entering and displaying a value.	1
Font	Sets the character size. Selectable from [Font 5], [Font 6], [Font 8], [Font 12], [Font 16], and [Font 32].	Font 6(DX1000) Font 8(DX2000)
Arrangement	Sets the horizontal arrangement of the string.Selectable from [Center], [Left], and [Right].	Right
Color	Sets the color of the string. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], and [BASE].	Black
Background color	Sets the background color. (Background colors available are same as those listed in Color.)	White
Minimum	Sets the minimum value that can be input for the lower limit.	-9.9999E+29
Maximum	Sets the maximum value that can be input for the upper limit.	9.9999E+29
Depend ID	Sets the ID number of the component on which this component is dependent. ▶See Section 2.2.	None
Visible	Sets [On] or [Off] to indicate whether or not this component is displayed. ▶See Section 2.2.	On
Sync act	▶See Section 2.2.	

Note

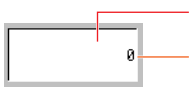
Maximum and Minimum are valid only when a value is entered from the communication input component of the custom display. These attributes do not influence the input from communication.

2.32 Attributes of Modbus In Components

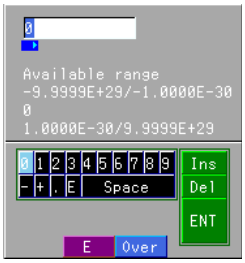
Creates a component that displays the input value of the communication channel set by the specified send command number, and that writes temperature controller and other SP values.
Normally, it displays the communication input value.
If an action function is executed, values can be written from a custom display screen to communication channels.
Written values are written to registers of a connected device through specified Modbus send commands.

Component type (See Section 1.4.)	Components with action functions	**Overlap restriction (See Section 1.4.)**	None	**Update cycle**	1 sec

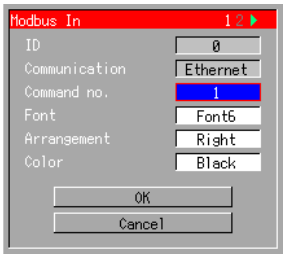
Parts of the component

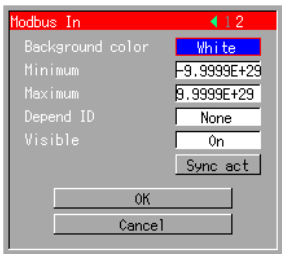


After pressing the **Up/Down arrow keys** to select the Comm In component in the execution panel, you can press the **DISP/ENTER** key to display a character/number input window on the right.



Attribute settings dialog box





List of Attributes

Attribute	Description	Default value
ID	Number automatically assigned for component identification.	0 to 79
Communication	Selects a communication kind of [Ethernet] or [Serial].	Ethernet
Command no.	Sets the Modbus send command number specified under Communication. Range: [1] to [16]	
Font	Set the character size of the Modbus input. Selectable from [Font 5], [Font 6], [Font 8], [Font 12], [Font 16], and [Font 32].	Font 6(DX1000) Font 8(DX2000)
Arrangement	Sets the horizontal arrangement of the string. Selectable from [Center], [Left], and [Right].	Right
Color	Sets the color of the string showing the Modbus input. Sets the color of the string. Selectable from among [Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Lightblue], [Violet], [Gray], [Lime], [Cyan], [Darkblue], [Yellow], [Lightgray], [Purple], [Pink], [L.brown], [L.green], [Darkgray], [Olive], [Darkcyan], [S.green], [Black], [White], and [BASE]. [Background color]: The base color set for the screen.	Black
Background color	Sets the background color. (Background colors available are same as those listed in Color.)	White

Continued on the next page

Attribute	Description	Default value
Minimum	Sets the lower limit of the numerical value that can be input for the minimum. If a value larger than the maximum is set, the maximum takes the same value as the minimum. Selectable range: -9.9999E+29 to -1.0000E-30 0 1.0000E-30 to 9.9999E+29	-9.9999E+29
Maximum	Sets the upper limit of the numerical value that can be input. If a value smaller than the minimum is set, the minimum takes the same value as the maximum. Selectable range: -9.9999E+29 to -1.0000E-30 0 1.0000E-30 to 9.9999E+29	9.9999E+29
Depend ID	Sets the ID number of the component on which this component is dependent. ▶See Section 2.2.	None
Visible	Sets [On] or [Off] to indicate whether or not this component is displayed. ▶See Section 2.2.	On
Sync act	▶See Section 2.2.	

3.1 Saving Screen Data

Any screen configured on the builder screen can be saved in file form in an external storage medium (CF card). Screen data is saved in two ways: specified screen and all screen.

Note

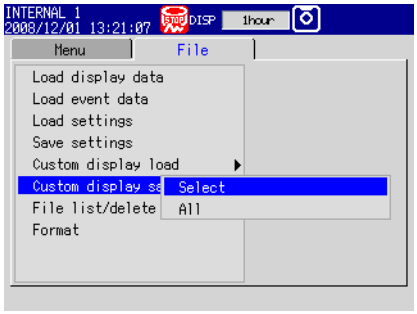
After editing the [Create], or [EXTERNAL 1] through [EXTERNAL 25] screens, be sure to update the screen. If you do not update the screen, the edited data will be lost. See “To Update an Edited Screen” in section 1.13.

Saving the Specified Screen

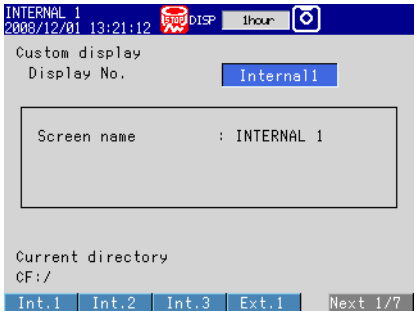
The specified custom display screen setting file is saved.

Procedure

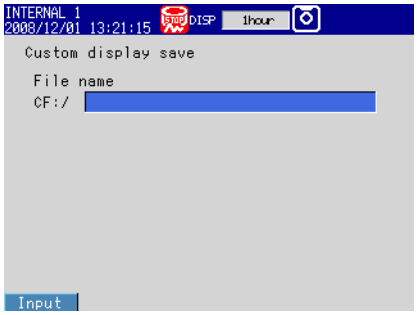
1. Press **MENU**.
2. On the **[File] tab**, select **[Custom display save]** > **[Select]**.



3. Select a screen number from the soft key menu.



4. Press the **Input soft key** and enter the file name.



5. Press **DISP/ENTER**.
   The file is saved in the root directory.

Explanation

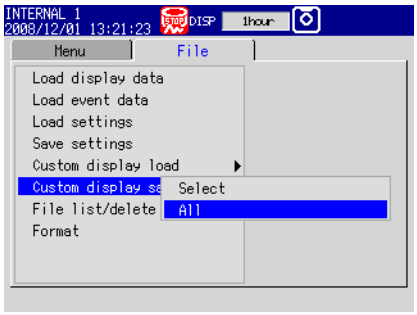
Item	Description
File extension	CDC
File form	Text
File to save	Custom display screen setting file (specified screen only) **File name (optional)** Any name consisting of up to half-size 32 characters (alphanumerics and symbols)
Saving destination	Root directory
Custom display screen Screen number choices	Internal 1 to 3 Custom display screen in the internal memory External 1 to 25 Custom display screen in an external storage medium (CF card)

Saving All Screen

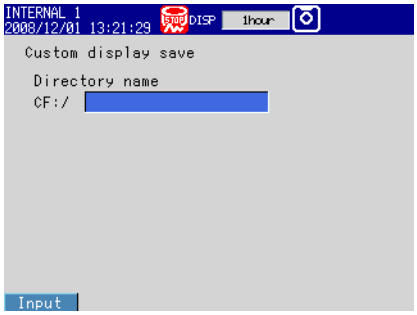
All custom display screen setting files in the internal memory and external storage medium (CF card) are saved in any directory specified for the external storage medium.

Procedure

1. Press **MENU**.
2. On the **[File] tab**, select **[Custom display save]** > **[All]**.



3. Press the **Input soft key** and enter the directory name.



5. Press **DISP/ENTER.**
   All screens are saved in the specified directory.

Explanation

Item	Description
File to save	Custom display screen setting file (All screen files being currently set) **File name (fixed)** Internal 1 to 3: Internal 1.CDC to Internal 3.CDC External 1 to 25: External 1.CDC to External 25.CDC
	Custom display-dedicated setting data file **File name (fixed)** Setting.CDS
	All bitmap files used on the custom display screen **File name (optional)** XXX.BMP (XXX: optional)
Saving destination	Specified directory **Directory name (optional)** Up to 20 characters (half-size alphanumerics and symbols)

Note

- The custom display screen setting file cannot be saved in USB memory.
- The file cannot be saved if no external storage medium (CF card) is inserted or an error is occurring.
- The file name is not a screen name. The screen name set on the builder screen is saved intact in the custom display screen setting file.

3.2 Reading Screen Data

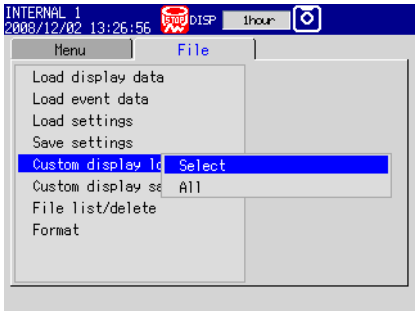
The screen data (custom display screen setting file) saved on external storage medium (CF card) can be read in the internal memory. Screen data is read in two ways: specified screen and all screen.

Reading the Specified Screen

The specified screen data (custom display screen setting file) is read.

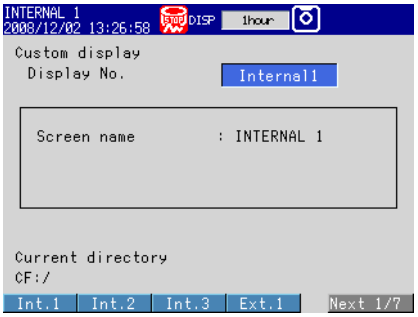
Procedure

1. Press **MENU**.
2. On the **[File] tab**, select **[Custom display load]** > **[Select]**.

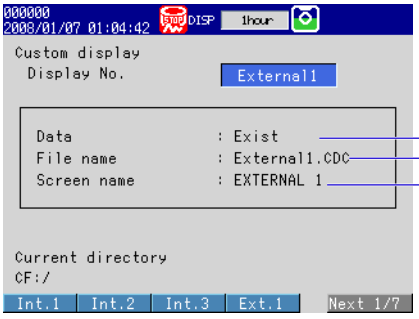


3. Select the screen number of the read destination from the soft key menu.
   You can select the screen number from among internal 1 to 3 and external 1 to 25 (see the next page).

Reading internal 1 to 3



Reading external 1 to 25

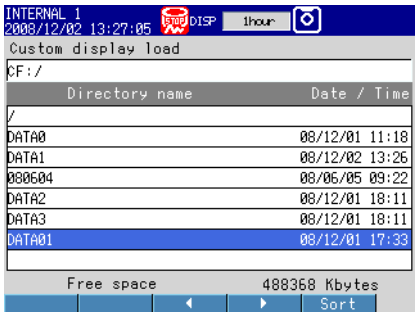


Presence/absence of data

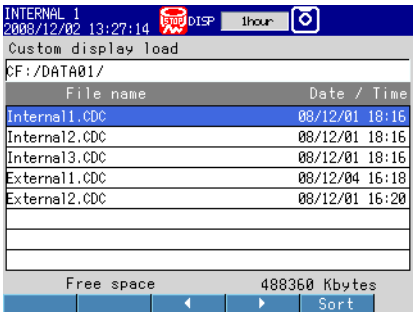
File names displayed in the file list

Screen names displayed in the submenu

4. Select the directory containing the file to be read.
   Only the custom display screen setting file (CDC) appears.



5. Select the file to be read.
The specified custom display screen setting file is read.



If external 1 to 25 are specified for file reading:
The selected custom display screen setting file is copied onto the external storage medium (CF card). If the file already exists, the following message appears:

Note

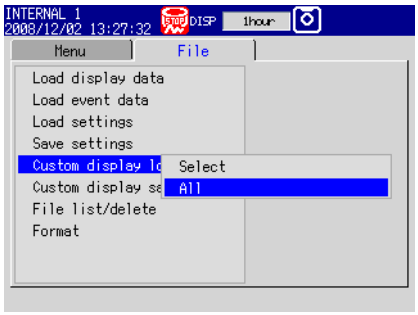
- If the capacity of the external storage medium (CF card) is insufficient, no file can be read with external 1 to 25 specified.
- The copy destination directory is the one used when the full screen is read last.
- If the capacity of the internal memory is 400 MB or more, the bitmaps can be displayed even if an external storage media (CF card) associated with screens in internal memory is not inserted.
- When loading screens or moving from the builder screen to the execution panel, the bitmap files in the CF card are copied to the internal memory.

Reading All Screen

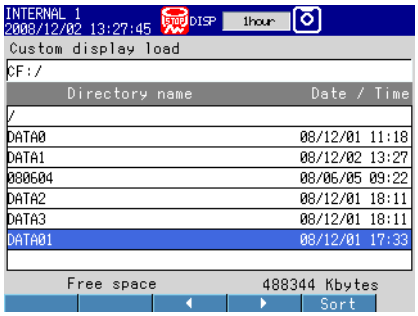
The specified directory is set as the read destination and custom display screen setting files are read in the internal memory.

Procedure

1. Press **MENU**.
2. On the **[File] tab**, select **[Custom display load]** > **[All]**.



3. Select a directory and press **DISP/ENTER**.



All custom display screen setting files are read.

Explanation

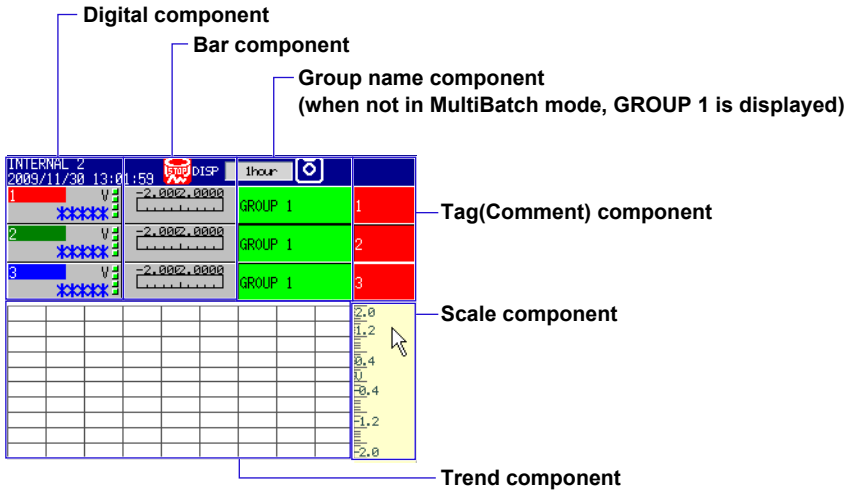
If screen data loading (Select, All) is executed, the screen name displayed on the custom screen submenu of the operation screen menu is updated.
If screen data loading (All) is executed, the specified directory becomes the read destination directory (the default is the root directory of the external storage medium (CF card)).

Notes on Screen Data Saving and Reading

To use the custom display screen from external storage medium (CF card), the CF card in which the screen is saved needs to be always inserted.
To allow the custom display screen of DX in use to be used with another DX, save that screen in the CF card of another DX.

Appendix 1 Example of Creating a Custom Display

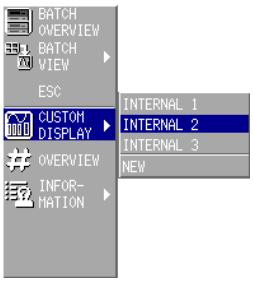
You can create the screen in the figure below.
This is for a DX1000 screen, with the MultiBatch function On.



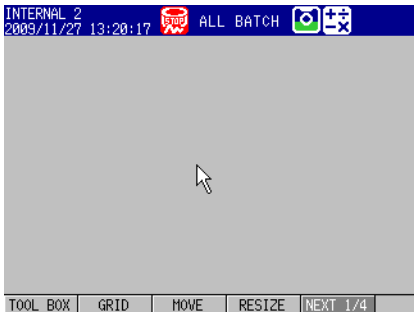
Creating components

Procedure

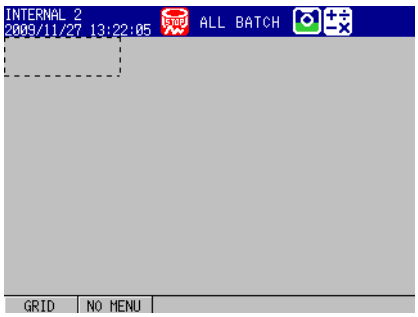
1. Press the **DISP/ENTER** key.
   The Screen menu appears.
2. Using the **up and down arrow keys**, select [INTERNAL 2], then press the **DISP/ENTER** key.
   The execution panel is displayed.



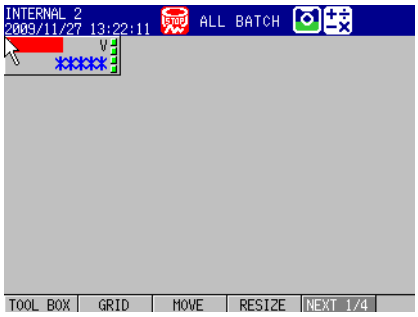
3. Press the **FUNC** key, then press the **Builder** soft key in the action menu.
   The Builder screen is displayed.



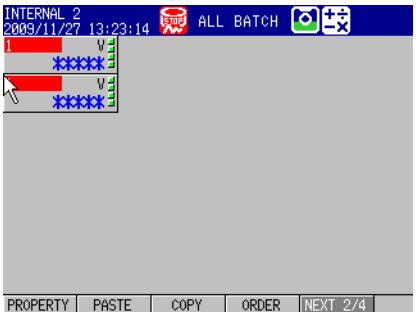
4. Using the **arrow keys**, move the cursor to the start position for creating the component.
5. Press the **TOOL BOX** soft key.
6. Press the **DIGITAL** soft key.
7. Using the **arrow keys**, create a dotted frame for the component.



8. Set the grid to 1 dot, and shrink the component frame vertically and horizontally by 1 dot.
9. Press the **DISP/ENTER** key.
   The Digital component is displayed.



10. Place the cursor on the Digital component, then press the **Copy** soft key.
11. With the **arrow keys**, move the cursor to the position where you want to paste the component.
    If you change the grid interval to 10 dots, you can move the cursor more quickly.
12. Press the **Paste** soft key.
    The component is copied.



13. Repeat steps 11 and 12 to make another copy.
14. Repeat steps 4 through 13 to create a Bar, Group name, and Tag comment component.

15. Repeat steps 4 through 9 to create a Trend and Scale component.
The component IDs are as follows.

Component ID	Component Kind
0, 1, 2	Digital
3, 4, 5	Bar
6, 7, 8	Group name
9, 10, 11	Tag comment
84	Trend
88	Scale

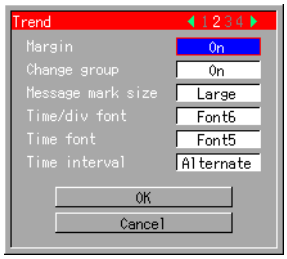
16. Move and resize each component so that they do not overlap each other.

Changing Component Attributes

Procedure

1. Place the cursor over the component whose attributes you wish to change.
2. Press the **PROPERTY** soft key.
   The component attribute dialog box is displayed.

Attribute dialog box example

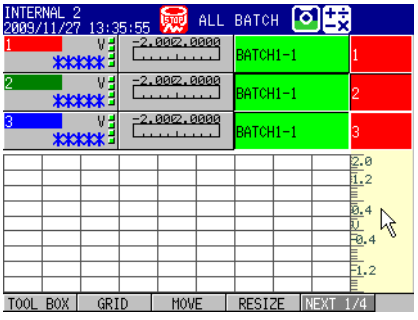


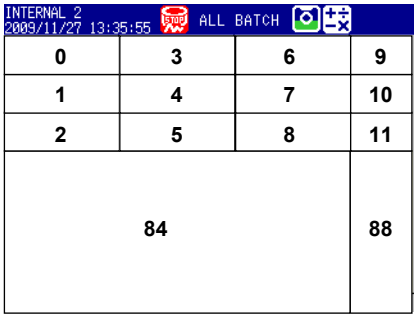
3. Change the settings. Settings not listed below should be left at their default values.

Example of component kinds and setting changes

Component Kind	Component ID	Setting Item to Change	New Setting
Group name	6	Background color	Lime
		Frame	Raised
Group name	7	Background color	Lime
		Frame	Sunken
Group name	8	Background color	Lime
		Frame	Sunken
Tag comment	9	Channel number	1
		Background color	Red
		Frame	White
Tag comment	10	Channel number	2
		Background color	Red
		Frame	Sunken
Tag comment	11	Channel number	3
		Background color	Red
		Frame	White
Trend	84	Direction	Horizontal
		Margin	On
Scale	88	Trend direction	Horizontal
		Indicator	Mark
		Indicator type	Balanced
		Margin	On

Screen creation example (builder screen) and component ID





Note

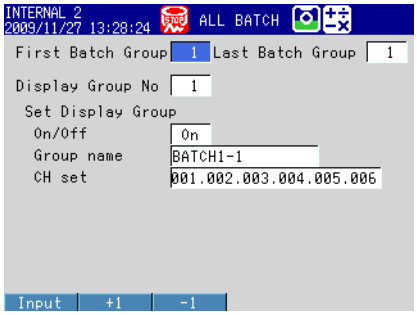
If you set the status area display to Off, you can increase the screen area.

Setting group control

After setting display groups, set up group control for the custom display.

Procedure

1. Press the **MENU** key (to Setting mode) and select [Set menu] tab > [Group tripline] > [Group].

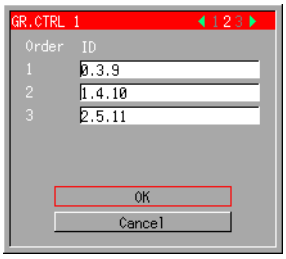


2. Set the first and last batch group to 1, then enter the group numbers and channel settings as follows.

Display group setting example

Group No.	Group name (leave default)	Channels
1	BATCH1-1	001, 002, 003
2	BATCH1-2	004, 005, 006
3	BATCH1-3	007, 008, 009
4	BATCH1-4	010, 011, 012

3. Return to the custom display builder screen, then press the **GR. CTRL** soft key.
4. Press the **GrpCtrl 1** soft key.
   The setting screen for GrpCtrl 1 appears.



5. Enter the following settings.

   In the ID boxes, you can only set components for channel assignment (see “ID Number of Components” in section 1.4).

Group Number (the group number in step 2)	Order	ID
1	1	0, 3, 9
	2	1, 4, 10
	3	2, 5, 11

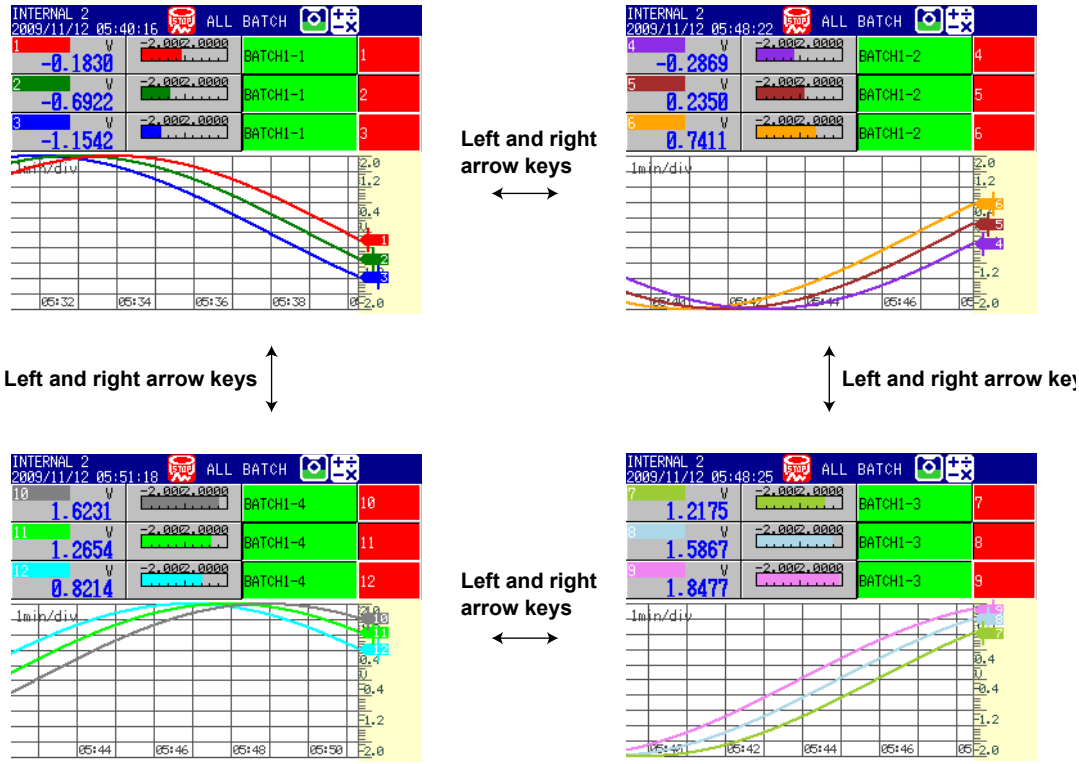
Explanation

Channel 001 is assigned to component ID 0 and 3, channel 002 is assigned to ID 1 and 4, and channel 003 is assigned to ID 2 and 5.
Pressing the right arrow key in the execution panel repeatedly changes the display group number to 2, 3, 4, 1, 2, and so on. If you press the left arrow key, the display group number changes in the reverse order.
If you press the right arrow key once, channel 4 is assigned to component ID 0 and 3, channel 005 is assigned to ID 1 and 4, and channel 006 is assigned to component ID 2 and 5.
The switching of the display by setting the display group in step 5 is described in the table below (the channel display changes from top to bottom.)

Switching of the channel display when pressing the right arrow key

	Component ID: 0, 3, 9	Component ID: 1, 4, 10	Component ID: 2, 5, 11
When the display group is 1	001	002	003
	004	005	006
	007	008	009
	010	011	012
When the display group is 2	004	005	006
	007	008	009
	010	011	012
	001	002	003
When the display group is 3	007	008	009
	010	011	012
	001	002	003
	004	005	006
When the display group is 4	010	011	012
	001	002	003
	004	005	006
	007	008	009

Example of switch of screen display



Group control 1 to 4 can be set. Use this for the 4-screen display on the DX2000.

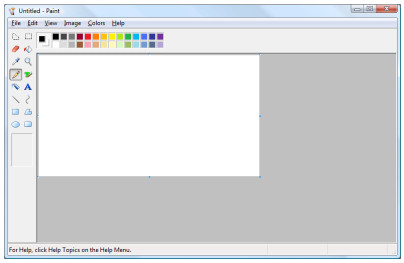
Preparing bitmap files

Bitmap files can be assigned to scale and bitmap components.
The following restrictions apply to bitmap files that can appear in custom displays.

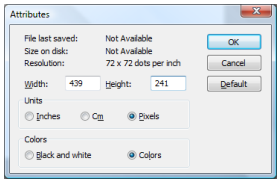
- Uncompressed format with 256 colors or fewer
- Data of screen size 640 (W) x 480 (H) pixels or less

If an uncompressed bitmap file cannot be displayed in a custom display, open the file in a Windows-based image editor (such as Windows “Paint”), perform the following operations, then save the file.

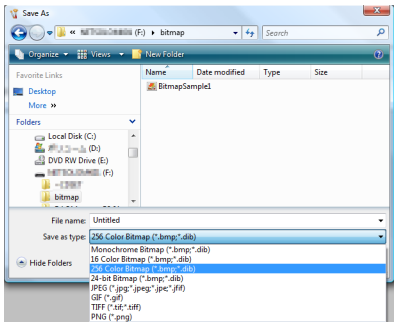
Starting Windows Paint



1. On the menu bar, click **Image** > **Attribute**.
   The [Attribute] dialog box appears.



2. Set the width and height to 640 and 480 or less.
   The bitmap file’s size units of pixels will be units of dots on the DX recorder screen. Starting from the upper left apex as the origin, the bitmap file is cropped to the specified size.
3. Set the color as desired, then click [OK].
4. On the menu bar, click **File** > **Save As**.
   The [Save As] dialog box opens.



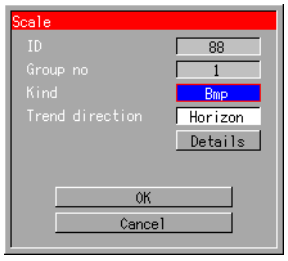
5. Enter a file name, then set the file type to [Monochrome bitmap], [16 color bitmap], or [256 color bitmap].
6. Click the [Save] button.
   The bitmap file is saved.

Assigning bitmap files to components

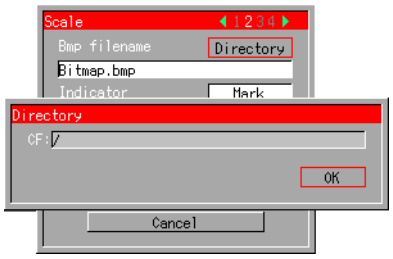
Display the attribute settings for the component to which you want to assign a bitmap. Check the bitmap source directory, then save your bitmap files to that directory.

Procedure

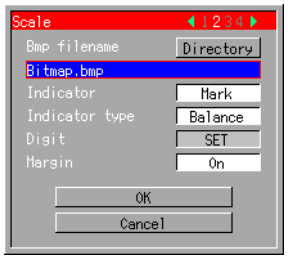
1. Move the cursor onto the scale component.
2. Press the **PROPERTY** soft key.
   The component attribute dialog box is displayed.
3. Set the [Kind] to [Bitmap].



4. Click the [Details] button, then press the **right arrow** key.
5. Select a directory, then press the **DISP/ENTER** key.
   The directory is displayed.



6. Press the **DISP/ENTER** key.
   The directory display screen closes.
7. Perform the following operation to save the bitmap file to the directory on the CF card you checked in step 4.
   1. Press the **FUNC** key, then press the soft key to eject the media.
   2. Press the **CF** soft key.
   3. Remove the **CF** card.
   4. After saving the bitmap files to the CF card, insert it into the DX recorder.
8. Enter the bmp file name.



9. Click [OK], then press the **DISP/ENTER** key.
The bitmap is displayed in the scale component.

Explanation

The directory for saving bitmap files is the directory last used for loading data.
You should make the size of the components displaying bitmaps the same size as the bitmaps themselves. If the bitmap is larger than the component, it will be cropped by the size of the component.

Appendix 2 Viewing Screens Created in DAQStudio

This is an example of how to view a screen created in DAQStudio on a DX recorder.

Procedure

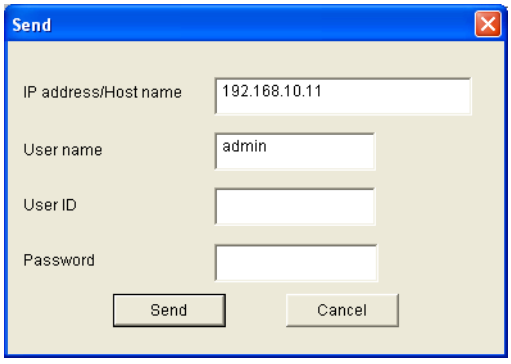
When receiving screen data from the DX recorder, the Channel/alarm list page is displayed in the work area.
If the DX includes the /AS1 option, set up the DX in advance as follows. (In the example of setting up the DX below, the user ID is not set.)

DX main unit (with /AS1 option) settings

1. Press **MENU** (to switch to setting mode), hold down **FUNC** for 3 s (to switch to basic setting mode), and select the Environment tab > Security > Communication, and set Login.
2. Select the Menu tab > User registration > Admin settings > Mode, set [Key+Comm], enter the user name, and return to the operation screen.
   If a password is set, this concludes the setup. If no password set, perform the following additional steps.
3. Press **FUNC**, select **Admin1**, then press **DISP/ENTER**.
4. Skip the user ID and select **ENT**.
5. Enter Admin1 for the password, then select **ENT**.
6. Enter a new password (between 6 and 20 alphanumeric characters, no spaces allowed), then select **ENT**.
7. Reenter the new password and select **ENT**.

Operation of DAQStudio

1. Open data that was created and saved in DAQStudio. When you open such data, if there are components to which bitmaps are assigned, be sure you save the bitmap files in the same location as the screen data.
2. On the menu bar, click **Communication** > **Send**.
   The send dialog box appears.



3. Check that the screen version and DX recorder version match.
   If the DX recorder version is earlier than the DAQStudio screen version, some components may not display.
4. Enter the IP address and host name, and the user name, user ID, and password set on the DX recorder.
   If a user name is not set on the DX recorder you are sending to, enter [admin].
5. Click the [Send] button.
   The screen sent to the DX recorder is displayed.

Explanation

DAQStudio screen versions and the DX recorder firmware version

When sending and receiving screen data, make sure the DAQStudio's screen version and the DX recorder's firmware version are either the same, or the version on the receiving end is newer. If the versions differ and you attempt to display screen data created on a new version using an older version, the components may not display properly. There are more kinds of components that can be created and attributes that can be set on the newer version. Since these cannot be displayed on the older version, the display will be incorrect.

Sending and receiving data to and from DAQStudio

When sending data from DAQStudio to the DX recorder, all screen and bitmap data in the folder containing the data being displayed by DAQStudio is loaded on the DX recorder.

When DAQStudio receives data from the DX recorder, all screen and bitmap data in the folder containing the data being displayed on the DX recorder is received into the folder containing the screen data currently being displayed by DAQStudio.

Appendix 3 Differences in Components by Release Number

The component types and attributes that can be created for custom display screens differ depending on the DX recorder release number.
Hereinafter, release number 3 and release number 4 will be notated as R3 and R4, respectively.

When displaying R3 screen data under R4

- Component attributes that became available for setting in R4 are set to their defaults.
- [2nd span Lower] and [2nd span Upper] settings of trend and scale components can now be set up to 1 decimal place.

When displaying R4 screen data under R3

- Components not supported in R3 are not displayed.
- The [Depend ID]'s of components dependent on other components that are not supported in R3 are set to [None].
- Component attributes not supported in R3 are deleted. The [Vertical display] of components whose attributes are deleted (Labels, Tag no., Tag comment, Units, SpanL, and SpanU) is changed to [Horizontal display].
- Component attributes not supported in R3 are ignored. The method of plotting is changed for components whose attributes are deleted (trend and scale).
- For the trend component's [2nd span Lower] and [2nd span Upper] attributes, the number of decimal places is changed to 0, and the number after the decimal point is rounded.
- For the scale component's [2nd span Lower] and [2nd span Upper] attributes, the number of decimal places is changed to 0, and the number after the decimal point is rounded.
- If not displaying the status area in an R4 screen, it is displayed. Components in the status area are repositioned.
  From the point at which you move the cursor to move a component, components in the status area move below the status area. When the status area is set to No Display, the height of components whose height is at the maximum remains the same, and the component is displayed below the status area.

Differences in Components by Release Number

Component	R3 screen	R4 screen
System icon		New
Group name		New
Batch group number		New
Batch name		New
Time label		New
Memory bar		New
Modbus In		New

Differences in Attributes by Release Number

Component	Attribute	R3 screen	R4 screen
Screen	Status area		New
Labels	Vertical display		New
Tag No.	Vertical display		New
Tag comment	Vertical display		New
Unit	Vertical display		New
SpanL	Vertical display		New
SpanU	Vertical display		New
Bitmap	Trend grid mode		New
Line	Trend grid mode		New

Continued on the next page

Component	Attribute	R3 screen	R4 screen
Trend	Margin		New
	Change group		New
	Time interval		New
	Time grid display		New
	Scale grid display		New
	2nd span Lower	No decimal place setting	One decimal place can be set
	2nd span Upper	No decimal place setting	One decimal place can be set
Scale	Indicator type		New
	Unit		New
	Margin on both sides of Span		New
	Display group switching		New
	2nd span Lower	No decimal place setting	One decimal place can be set
	2nd span Upper	No decimal place setting	One decimal place can be set

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